Factsheet
Producing and marketing entire male pigs

History
2012  Declaration of Brussels
Target: ending castration in 2018 within the EU

Current EU status
Most countries behind schedule
UK - almost 100% entire male pigs (no castration)
ES - partly castration, depending on end products
NL - over 60% entire male pigs
DE - most castrated male pigs, slowly and carefully moving
DK – discussing; working on animal welfare issues
BE - in progress, moving towards entire male pigs
FR - small part entire male pigs; hardly progress
IT - 100% castrated male pigs
Eastern Europe - no issue; no progress
Nordic countries – very slowly moving

Research
Long term/various subjects throughout the chain
DG Sanco
National projects

(Dis)Advantages boars in the pork supply chain
Pigs  An end to painful measures
Farmers
An end to an unpleasant job
Better technical and economic results
Slaughter and processing
Cost of detection system
Market acceptance challenges
Retail and out-of-home
Corporate Social Responsibility
Societal appreciation
Consumers
Hardly knowledge
Golden standard (preventive measures/safety net/no complaints)
Environment
Due to better growth less feed needed
Less feed production less agricultural land needed for feed and less manure.
Barriers
- Difficult to change 50 years old habits
- Traditional attitudes in supply chain
- Lack of knowledge and trust
- Strong hesitations
- New inline detection system (lack of knowledge and trust)
- Genetic selection effective, but long term solution
- Strong existing views/resistance to change

Opportunities and benefits
- Improving animal welfare >> consumer appreciation
- Profitable for pig farmers
- Contribution to environment >> less feed/sustainable
- Improving image supply chain

Experiences
- UK no problems
- ES no problems
- NL no consumer complaints since introduction boar meat
  - Consumption in line with European trend
  - 1.1.2014: only pork from entire mail pigs in Dutch supermarkets

Castration and alternatives
- Surgical castration as has been implemented for decades whereby the young boar piglets’ testicles are cut off.
- Immunocastration whereby the boar is injected twice with a substance that that restrains the growth of the testicles.
- Non castration, for this optimum husbandry conditions is needed; correct accommodation, genetics, nutrition, hygiene and calm in the shed, play materials.

Surgical castration is (by far) the most common method employed.
Immunocastration is used to a lesser extent as it is expensive, labor intensive, retains animal interventions and isn’t accepted everywhere by the market.
Non castration is the most cost efficient method.

Possibilities
- High level of expertise available (www.boars2018.com)
- Sharing facts and figures creates trust
- High level market intelligence available
- Reliable detection method available (proof)
- Increased worldwide focus on sustainability and animal welfare
Producing entire male pigs
Combination of preventive measures and safety net at slaughter line
Preventive measures: breeding, feeding and farm management
Breeding is very (cost) effective, but long term solution
Farm management based on do’s and don’ts
Do’s >> hygiene, group size, feeding system
>> regularity, tranquility/calmness
If not >> undesired, risk on aggressive behavior

Marketing entire male pigs
Large scale sales of boar meat Dutch supermarkets since 2011
No meat from castrated pigs in Dutch supermarkets since 2014
Dutch per capita pork consumption over 2010-2013 developed favorably compared to other countries e.g. France and Belgium.

A carcass that is detected for boar taint has a lower market value, ranging from 15 to 25 euro per tainted carcass. With 4% tainted carcasses of male pigs, this is equal to 0,60 to 1,00 euro over all carcasses of male pigs. This is still considerably lower than the reduction in feed costs of 6,00 euro per carcass of a male pig.

Quality guarantees
Detection for boar taint on line
Example: HNS (human nose system)
A sensory detection system, used in slaughter plants
HNS system applied in commercial slaughterhouses since 2008
HNS system on large scale in slaughterhouses since 2011
(total tests: over 2 million of carcasses)
Proof human nose: the best guarantee control for wine
The HNS system is implemented in a few large slaughterhouses in Belgium, Germany and The Netherlands and also used by one in France.

Research shows that meat quality is based on meat-fat relations. This can be unfavorable but can be the case with all pigs. Good nutrition at the end of the fattening period can eliminate this.

Meat with boar taint: no waste
Boar tainted meat is not wasted, but fully used. The meat can be used for all pork products that are not sold as fresh meat. Examples of these products are Bacon, luncheon meat, sliced sausages, salami, farmers sausage, ham, fricandaju, liver sausage, black pudding.
Characteristics HNS system
Scoring scale (yes-no or 5 point scoring scale)
Heating of neck fat with heated metal plate
(Neck is preferred to belly for reasons of convenience)
Maximum 30 minutes by trained assessor, followed by minimum rest of 15 minutes
Selection/training protocol assessors
  sensitive to androstenone and skatole solutions
  3 day training in laboratory setting
  evaluation performance at slaughter line compared to trainer
Daily control of each assessor performance
Weekly quality assessment of each assessor
Slaughter line speed up to 650 pigs/hour
Located in slaughter line after splitting and before cooling area

Commercial application HNS system
Applied in a few large slaughter plants in BE, DE and NL
Mean percentage boar taint detection: around 4
Spread from 10% to close to 0% per farm

Detection as predictor of consumer perception
Any detection system should predict consumer perception as good as possible.
HNS system is compared with the use of androstenone or skatole as predictors.
HNS system performed best, followed by skatole.

Conclusive
  Boars is only design challenge (not a problem)
  Strong existing views/resistance to change
  Barriers, but also benefits and solutions
  Consumer golden standard (quality guarantees)
  Detection: proof of pudding in eating
  Do’s and don’ts boar management available
  Lower food print boars (5 – 8%)
  Genetic measures effective and in use
  Quality guaranteed pork from entire male pigs possible
  Worldwide focus on sustainability/animal welfare increasing
  Brussels declaration : 2018 nearby