

Second progress report 2015 – 2017 on the European declaration on alternatives to surgical castration of pigs

Expert Group on ending surgical castration of pigs

Gé Backus (Wageningen UR)

Miguel Higuera (Copa-Cogeca)

Niels Juul (Landbrug og Fødevarer)

Elena Nalon (Eurogroup for Animals)

Nancy de Briyne (FVE)

Brussels, May 1 2018

Contents

1. Abstract
2. Introduction
3. Recent developments
 - 3.1. State of play
 - 3.2. Developments by country
 - 3.3. Lessons learned and future steps
4. Reflection on the results

Appendix 1: European Declaration on alternatives to surgical castration of pigs

Appendix 2: Signatories to the European Declaration

Appendix 3. Survey questions to the country experts

1. ABSTRACT

In 2010, the 'European Declaration on alternatives to surgical castration of pigs' was agreed. The Declaration stipulated that from January 1, 2012, surgical castration of pigs should only be performed with prolonged analgesia and/or anaesthesia and from 2018 surgical castration of pigs should have been phased out altogether. A first progress report was prepared in 2014, and here-under you can find the 2nd progress report covering the period 2015 – 2017. Members of the Expert group are COPA-COGECA, national and regional farmers associations, UECBV, CLITRAVI, ADT, FESASS, IFAH-Europe, QS, EFFAB, FVE, DAFC, UGPVB, Cooperl, ANPROGAPOR, Eurogroup for Animals, Eurocommerce, independent scientific experts and policy officers.

The 2nd progress report collected country specific information by approaching country experts that were willing to share information on the recent developments in their countries. The experts were asked to reply to a questionnaire consisting in open and/or closed questions. The questions are presented in Appendix 3. In total, experts from 20 EU countries were invited to respond, and 13 responded.

Results of this survey show that still large differences exist between countries in producing and marketing non-castrated male pigs. The results are similar to those of the 1st progress report, in that there are still marked differences between countries having a tradition of producing entire males such as the United Kingdom, Ireland, Spain and Portugal, and countries in which companies have started in the period 2010-2015, such as The Netherlands and Belgium. Pork food supply chains and retail organisations in these countries have successfully adapted best practices to end the surgical castration of piglets. During the period 2015-2017 France and Germany gradually increased the number of entire male pigs reaching 22% and 20%, respectively. We estimate that by January 2018, large pork food supply chains in 8 major pork producing countries have established successful directions for solutions for ending surgical castration, although some countries had already a tradition of not castrating male pigs. However, in most of the other countries there is still no or little sense of urgency to achieve the ambition of the European Declaration.

The European Declaration as a voluntary stakeholder-led initiative aimed at improving animal welfare did not reach its stated objectives (both in terms of the 2012 and the 2018 deadlines). This warrants a critical reflection on the best way forward. However, other initiatives offer perspectives for further progress. We may observe that preventive measures (feed and genetics) to reduce boar taint prevalence have been evaluated successful and in some cases are already implemented. Moreover, slaughter plants have developed simple but effective methods for detection of boar taint. Also, the establishment of the IPEMA (Innovative Approaches for Pork Production with Entire Males) COST action program and the decision of the European Parliament to fund the collecting and dissemination of best practices on the marketing and valorisation of pork products from pigs that are not surgically castrated are relevant developments that may speed up the process.

To conclude, the ambition formulated in 2010 to achieve a market based EU-wide phasing out of the surgical castration of piglets by 2018 has not been realized. Nevertheless, the Declaration has been an innovative and positive step facilitating communication between all stakeholders and which achieved encouraging results towards alleviating pig pain. It also led to (1) a progress report published in 2014; (2) a roadmap prepared in 2015 clearly outlining necessary actions and steps to be taken in the near future; (3) the broad dissemination of the results of the research projects funded by the Commission; and (4) a decreasing number of castrated pigs, and more awareness in general.

Right now the expert group of the European Declaration is working on (1) a list of products and protocols used for anaesthesia and analgesia, and (2) establishing stronger connection with the IPEMA COST action program. We do realize that the market is not yet ready to accept one solution, and that more knowledge and dissemination of good practices is required, particularly on the following aspects: (1) methods of boar taint detection; (2) the distribution of costs and benefits along the value chain; (3) how to position the added-value products obtained from non-castrated pigs on the

international meat market (4) preparing a list of traditional products requiring heavier pigs, for which more research is required to establish which alternatives to surgical castration can guarantee meat quality (5) availability of effective and practical analgesic and anaesthetic protocols for on-farm use and (6) effective communication and dissemination of the knowledge and expertise already developed within major pork value chains.

The expert group has by now established a broad network bringing stakeholders together to work on different areas (business, science, society, policy), sometimes with diverging interests, but in a collaborative context that facilitates the creation of common ground. Progress has not been made as fast and as far as it may have been expected when the European Declaration was signed. At present the expert group is lacking the human and financial resources to go faster in pursuing the objectives of the European declaration. The market and retailers also don't appear to be ready for a transition at EU level at the moment. But we need support for our work to help us to get to the next level and market acceptance of the specified animal welfare aspects in the declaration.

2. INTRODUCTION

Castration of male piglets without pain relief is regarded as an infringement of the wellbeing and integrity of the animal. Partly for that reason, the issue of the castration of male piglets has grown in importance in the last decade. The complexity of the subject represents an enormous challenge for all those concerned. Not only does it involve many different parties across the pork supply chain, but the practical aspects are complex and multi-faceted. Nonetheless, two member states (Belgium and The Netherlands) recently managed to overcome these challenges on their domestic market.

On the invitation of the European Commission and the Belgian Presidency of 2010 and following a workshop on alternatives for pig castration, representatives of European farmers, meat industry, retailers, scientists, veterinarians and animal welfare NGOs met in Brussels to discuss the issue of pig castration and its possible alternatives, and to consider an to end this practice. They decided to sign the European Declaration on alternatives to surgical castration of pigs. As a first step, it was foreseen that from 1 January 2012, surgical castration of pigs, if carried out, should be performed with prolonged analgesia and/or anaesthesia with methods mutually recognised. As a second step, surgical castration of pigs should have been abandoned by 1 January 2018. The participants argued in favour of voluntary introduction and against regulation. The parties wished to use the market to solve the issue. Their ambition was to practice nothing other than castration with prolonged analgesia and/or anaesthesia in 2012 and to end surgical castration throughout the EU in 2018.

The signatories established an expert group, to take care of the progress towards meeting the medium and long-term ambitions of the Declaration. Part of the strategy was to exchange information across member states on barriers and options for solutions. The Expert Group prepared a first progress report in 2014. This report provides an update for the period 2015-2017.

3. DEVELOPMENTS BY COUNTRY

3.1. STATE OF PLAY

The percentages of entire males, immunocastrated and surgically castrated commercial piglets and methods of castration used in 24 selected countries are presented below.

Country	Entire males	Immuno castrated	Surgical Castration	Break-out surgical castration			Pig population
				Castrated with analgesia & anaesthesia	Castrated with analgesia only (%)	Castrated without analgesia OR anaesthesia	
	% total	% total	% total	% total surgical	% total surgical	% total surgical	X1000
<i>Countries in Italics updated for 2017. Other countries based on 2015 FVE survey¹</i>							
<i>Austria</i>	5	0	95	1	99	0	2846
<i>Belgium</i>	8	15	80	3	6	91	6351
Czech	5	5	90	6	31	63	1548
<i>Denmark²</i>	<2	0	>97	0	95	5	12402
Estonia	0	0	100	0	10	90	359
Finland	4	0	96	0.5	99	0.5	1258
<i>France</i>	22	<0.1%	78	0	50	50	11835
<i>Germany</i>	20	<1%	80	1	90	9	27600
Hungary	1	0	99	0	0	100	2935
Iceland	0	0	99	99	0	1	36
Italy	2	5	93	0.5	2.5	97	8561
Ireland	100	0	0	0	0	0	1468
Latvia	0	0	100	0	0	100	368
Luxembourg	1	0	99	0	99	1	90
<i>Macedonia (Fyrom)</i>	0	0	100	0	2	98	200
<i>Netherlands</i>	65	0	35	0	0	100	12013
<i>Norway</i>	<1	6	94	99	0	1	1644
Portugal	85	2.5	12.5	0	0	100	2014
Romania	0	5	95	2	4	94	5180
Slovakia	0	10	90	0	12	88	637
<i>Slovenia</i>	1	0	99	1	9	90	288
<i>Spain</i>	80	5	15	1	1	98	28500
<i>Sweden³</i>	1	9	90	100		0	1354
Switzerland	5	2.5	92.5	97	0	3	1573
UK	98	<1%	2	4.5	4.5	91	4383

¹ De Briyne N et al, (2016) Pig castration: will the EU manage to ban pig castration by 2018? Porcine Health Management 2016 2:2

² Denmark is the largest exporter of weaners in the EU. Therefore, the column 'pig population' misrepresents the situations somewhat. The number of entire male pigs in Denmark is approximately 300.000 per year. This is less than 2 percent of the male pigs. See also a parliamentary question to the Danish minister stating that in 2016 production was 325.287 entire male pigs.

<http://www.ft.dk/samling/20171/almdel/mof/spm/268/svar/1453551/1836336.pdf>

³ The presented percentage of immuno castrated pigs in Sweden is by some experts considered to be very high and not realistic, and by others to be low.

3.2. Developments by country

Data on the developments by country were collected by inviting experts from EU member states, most of them participating in the IPEMA cost action program. The questions are listed in appendix 3. The following statements reflect the opinions of the local experts. We do not take responsibility for the accuracy of the information.

AUSTRIA

Castration is an issue that sometimes attracts media attention. This attention does not increase and is stable. There is no sense of urgency for the pig sector in Austria to work towards ending surgical castration, and there are to the best of our knowledge, no retailers in Austria that are involved in activities aimed at ending castration.

The use of analgesia will be mandatory according the revised animal welfare regulation (Tierhaltungsverordnung) which should be published within the year 2017. Additionally, the law foresees that as soon as new and more effective anaesthetic protocols become available that can be performed by the farmer, these new procedures have to be taken up by the industry.

There has been no research on the castration topic in the last 5 years in Austria due to lack of interest and funding by industry and administration.

There have been intensive discussions on the castration issue in an officially installed expert group (pig industry, administration, vets, science, ethicists, animal welfare groups). The final report and conclusions have been the basis for the political discussion and have lead to new animal welfare legislation.

BELGIUM

Castration is an issue that does not attract media attention. Currently an political campaign is ongoing promote a legislative ban on surgical castration in Wallonia (<https://www.gaia.be/fr/actualite/spot-tv-pour-faire-interdire-castration-des-porcelets>).

There are retailers in Belgium that are involved in activities aimed at ending castration. Major retailers only accept pig meat from non castrated animals (Carrefour, LIDL do not accept castrated pig meat and Colruyt only accepts immunocastrated pig meat).

There have there been no legislative measures in this field. Universities and research organisations (ILVO, Ghent University, KU Leuven) conduct research on the castration topic.

The government does not subsidise or compensate farmers, e.g. financial compensation for using anaesthesia and or analgesia.

CROATIA

Castration is an issue that not really attracts media attention. This attention does not increase and is stable. There is no sense of urgency for the pig sector in Croatia to work towards ending surgical castration, and there are to the best of our knowledge, no retailers in Croatia that are involved in activities aimed at ending castration.

The current regulation on protection of pigs (NN 119/2010) stipulates following: " If castration or shortening of the tail is to be carried out after the seventh day of life, it must be carried out by the veterinarian and by using anesthesia and remedies for alleviating the pain of prolonged action.

There has been some research at the Agricultural Faculty of Osijek.

The government does not subsidise or compensate farmers, e.g. financial compensation for using anesthesia and or analgesia.

DENMARK

Castration is sometimes an issue that attracts media attention in Denmark, but there is for the time being more focus on tail docking. There is however some sense of urgency for the pork sector and the

government to work towards ending surgical castration. As a consequence of that, the Danish pork industry announced in January 2018 that from January 1st, 2019 the Danish pig producers will apply local anaesthesia as a requirement in the Danish pig producers quality assurance program "DANISH PRODUCT STANDARD". Since January 2018 it is legal for farmers and employees to administer local anaesthesia themselves. Farmers and employees must complete a training course of 6-8 hours. The Danish Industry recommends the use of the EU-approved veterinary medical product named "PRONESTESIC". The use of analgesia was already on a voluntary basis introduced in 2009 and made obligatory by law in 2012. Both universities and the pork sector have ongoing research projects as far as castration and production of male pigs are concerned."

FRANCE

Castration is sometimes an issue that attracts media attention in France. This attention does increase. There is some sense of urgency for the pig sector in France to work towards ending surgical castration. To the best of our knowledge, some retailers in France are involved in activities aimed at ending castration.

There have been no accepted legislative measures in this field.

Several research institutes in France have research projects on the topic of castration:

1. IFIP-INRA on genetic aspect on boars and sows in relation with boar taints
2. IFIP on alternatives to actual castration (analgesia and anaesthesia)
3. IFIP on rapid detection method on slaughter line (no success at the moment)

The government does not subsidize or compensate farmers, e.g. financial compensation for using anaesthesia and or analgesia.

GERMANY

Castration is not often an issue that attracts media attention in Germany. This attention is stable. There is a sense of urgency for the pig sector in Germany to work towards ending surgical castration. To the best of our knowledge, several retailers in Germany are involved in activities aimed at ending castration. They adapted their company policies respectively.

The national animal protection act has been adapted in 2013. The important modifications included in this act will be into effect from 1st January 2019, including the prohibition to carry out surgical pig castration without anaesthesia.

Several universities in Germany have research projects on the topic of castration.

The government does not subsidise or compensate farmers, e.g. financial compensation for using anaesthesia and or analgesia. But a small number of farmers are supported in action research, however not on a general basis.

FYROM

Castration is sometimes an issue that attracts media attention in FYROM. This attention is stable. There is not really a sense of urgency for the pig sector in FYROM to work towards ending surgical castration. Industry partners have doubts about stopping pig castration considering the high carcass weight and the lack of market acceptance (of tainted carcasses? Of the risk of boar taint?). To the best of the expert's knowledge, no retailers in FYROM are involved in activities aimed at ending castration. Legislative measures: Regulative for animal protection and welfare (Official Journal of Republic of FYROM, 149/2014) where in general it is proposed that castration as surgical procedure should be done under analgesia, local or total anaesthesia. Under the management practices in the local pig production chain, male pigs are castrated in the first week of life. Until now, analgesia / anaesthesia during castration procedure is only used when male pigs weigh more than 50 kg (some cases when they were not castrated in the first week of life) or when castrated boars, while week-old piglets old are castrated without using analgesia/anaesthesia.

The government does not subsidize or compensate farmers, e.g. financial compensation for using anaesthesia and or analgesia.

ITALY

Castration does not attract media attention and there is no sense of urgency for the pig sector to work to end surgical castration. The legislation currently in force is Directive 120/2008 implemented in Italy with Legislative Decree 122/2011. The legislation provides that surgical castration can be carried out by means that it does not include the tearing of tissues for piglets with less than 7 days of life, and for piglets older than only with anesthesia and prolonged analgesia.

Numerous trials have been conducted in Italy to look for an alternative to surgical castration.

The Italian market is characterized by high quality productions and by the processing of heavy pigs, implying market demand for meat from castrated animals.

In Italy the possible obligation of castration with the use of analgesics and / or anesthetics should affect more than 4 million animals.

With immunocastration, the lack of removal of the testicles causes depreciation and lowering of the quality of the thighs destined to the DOP circuit, since at the time of cutting, part of the meat adhering to the thigh is removed.

THE NETHERLANDS

Castration is not anymore an issue that attracts media attention in the Netherlands. This attention is stable. There is a sense of urgency for the Dutch pig sector to further work towards ending surgical castration. There are no legislative measures as the focus in the Netherlands is on realizing market based solutions for ending castration. There is limited funding for collective actions in this field.

There is limited academic research in the Netherlands on the topic of castration.

The government does not subsidize or compensate farmers, e.g. financial compensation for using anaesthesia and or analgesia.

NORWAY

In Norway, all pigs are castrated with analgesia and an injection of local anaesthesia in the testicles. The Norwegian pig industry does not consider entire male production feasible, and vaccination against boar taint using Improvac is viewed as the only alternative to surgical castration. Castration is not often an issue that regularly attracts media attention. There is some sense of urgency for the pig sector in Norway to work towards ending surgical castration. To the best of our knowledge, no retailers in Norway are involved in activities aimed at ending castration. There have been no legislative measures in this field, but in 2015 the meat industry agreed with the Minister of Agriculture to a plan with the aim to increase use of Improvac to 10 % and improve the competence level regarding Improvac in the industry. However, the plan has not been followed through, and after an initial increase 2017 has seen a decrease in farmers using Improvac. This is mainly due to three factors (1) The farmers' risk of being fined on carcass samples measuring above the 1 ppm androstenone threshold (2) Lack of information, with no incentives for farmers trying out vaccination and (3) In Norway ELISA testing is used for boar taint detecting, which is expensive.

Currently, one research project that focuses on the topic of castration is active in Norway. The project "Boar PPM" lasts from 2016-2020 and investigates consumer opinions, genetic selection for low boar taint levels and aims to develop a new method for boar taint measurements at the slaughter line.

SLOVENIA

Castration is an issue that does not often attract media attention in in Slovenia. This attention is stable. There is not really a sense of urgency for the pig sector in Slovenia to work towards ending surgical castration. To the best of our knowledge, retailers in Slovenia are not really involved in activities aimed at ending castration.

The research institute (KIS) has some projects on castration and also cooperates with various universities. There was a constant research on the alternatives at KIS since 2010, the majority of them in cooperation with large pig producing and meat processing companies. However, the majority of the stakeholders (including governmental institutions) are not acting for the development in that direction.

Slovenia has a special “improved welfare” regulation that includes also pain relief at castration, respecting which, the farmers get the subsidies.

SPAIN

The majority of pigs is not castrated in Spain. Castration is not an issue that attracts media attention in Spain. The industry has been adapted to process non castrated animals and the commodity production in Spain had been non castrated for decades. On the other hand, high quality traditional products produced with local breeds and with a high slaughter weight, have a higher risk of boar taint and are castrated. There are some trials in imunocastration, the use of anesthesia and some trials regarding boar detection.

There are some private initiatives led by farmers to end castration in traditional products moving to imunocastration. However, there is no interest by retailers to be involved in activities in order to stop surgical castration. And there is no legislative measure in this field. The government does not subsidize or compensate farmers, e.g. financial compensation for using anesthesia and or analgesia. Some research institutes in Spain have research projects on boar taint detection and masking. Weekly market prices indicate the different prices for non-castrated pigs and the heavy ones.

SWEDEN

Castration is an issue that not often attracts media attention in Sweden. This is stable. There is not really a sense of urgency for the pig sector in Sweden to work towards ending surgical castration. To the best of your knowledge, retailers in your country are not really involved in activities aimed at ending castration.

Legislative measures in this field are that as from 2016, the pigs should be surgically castrated with anaesthesia

In Sweden, almost all pigs are castrated with using analgesia and anaesthesia The government used to compensate farmers, e.g. financial compensation for using anaesthesia and analgesia or for vaccinating pigs against boar taint. Since 2018 there is no governmental financial compensation for using anaesthesia and analgesia, or vaccination.

GREECE

Castration is not an issue that attracts media attention in Greece. There is some sense of urgency for the pig sector in Greece to work towards ending surgical castration. According to the consulted expert, no retailers in Greece are involved in activities aimed at ending castration. There have been no legislative measures in this field accepted.

The government does not subsidize or compensate farmers, e.g. financial compensation for using anaesthesia and or analgesia.

3.3 Lessons learned and future steps

Experience of producing non-castrated male pigs is varied. It ranges from those countries with a lot of tradition such as the United Kingdom Ireland, Spain and Portugal, to countries in which companies have only recently started such as The Netherlands and Belgium. In recent years the percentage of entire males pigs also increased in France and Germany.

On 1 January 2018 the scope of the European Declaration formally came to an end, and neither of its deadlines were met. As can be seen from the FVE data, as of 2015 most piglets across the EU were still surgically castrated in countries where this is traditionally done. The procedure is still predominantly carried out either without pain relief, or with insufficient pain relief (i.e., only with analgesia). A few countries support farmers who want to give pain relief to piglets during surgical castration, but in the majority of countries no financial support is offered to facilitate the transition towards more welfare-friendly practices. In most countries there is no real sense of urgency to move away from traditional practices, although some progress is visible compared to the previous report, especially in the commitments of retailers. Legislation is coming into force in Germany in 2019 phasing out castration without anaesthesia, and it remains to be seen which effects this will have on the rest of the European industry, as it is expected that the German meat industry will apply this requirement also to imported piglets.

In general, we can conclude that the progress obtained in the period 2010-2018 has been insufficient to guarantee a harmonised situation across the EU, but that positive developments are visible, albeit at different paces, in a few member states. We may also observe that preventive measures (feed and genetics) to reduce boar taint prevalence have been evaluated successful and in some cases are already implemented. Moreover, slaughter plants have developed simple but effective methods for detection of boar taint.

In both Belgium (Dumoulin) and the Netherlands (Vitelia) feed companies exploring the perspectives for reducing skatole levels by adding specific compounds to pig feed have reported successful trials. In the experimental trial by Vitelia 7% inuline was added to the feed for fattening pigs. The rate of animals with boar taint reduced from 1.1% to 0.6%, and skatole content decreased with 80%, to 120 microgram per gram fat. The Dumoulin trial had comparably favourable results.

The rate of reduction in boar taint through genetic selection can be enhanced through the consideration of genomic information. Several genomic regions have been shown to have highly significant association with the boar taint compounds and human nose scores. The use of this naturally available genomic variation and sorting of AI boars using breeding values for boar taint compounds and human nose scores can reduce the proportion of boar taint by up to 40%. There is 18% more reduction due to this genomic selection compared to the quantitative approach. Furthermore, use of genomics allows for selection of young animals. Therefore, a genetic solution to reduce boar taint and to stop castration is possible and achievable within the near future.⁴

⁴ Research on genetics indicates that boar taint has small but favourable genetic correlations with some of the finishing traits. The correlations with sow productivity traits were generally small and sometimes unfavourable but manageable. Even correlations with male fertility are, surprisingly, small. It was shown that it is possible to use breeding strategies for selection against boar taint without any unfavourable correlated responses on traits of economic importance. In fact, there is a net economic benefit to the producers by raising entire males compare to castrates and barrows. There is an improvement in growth performance (due to the better feed conversion ratio) of boars compared to barrows, and an improvement in boar carcass quality (resulting in a better slaughter pig price).

A simple but effective method for detection of boar taint in slaughter plants was developed. This method called “Human Nose Scores” is based on recording boar taint following heating. It has been implemented in slaughter plants in Belgium, France, Germany and the Netherlands. The method was also useful in developing several preventive measures through genetics, nutrition and management. It was observed that boar taint is highly heritable. The heritabilities of the boar taint compounds, androstenone and skatole, were 54% and 48%, respectively and that for the human nose scores ranged from 12% to 19%. Human nose sores had high genetic correlations with boar taint compounds ranging from 0.64 to 0.99 suggesting favourable responses to genetic selection against boar taint.

Also other initiatives will may contribute to book further progress in moving away from surgical pig castration in Europe. The first one is the IPEMA, Innovative Approaches for Pork Production with Entire Males COST action program supported by the European Union. The second one is a 2-year pilot project recently approved by the European Parliament and the Commission, which will consist in the collecting and dissemination of best practices for the marketing and valorisation within the EU of pig meat obtained from pigs that have not been surgically castrated. The third one is the establishment of the EU animal welfare platform in 2017.

IPEMA COST ACTION

The aim of the COST action IPEMA is to find general, region-specific or chain-specific solutions to facilitate the development of alternatives to surgical castration. IPEMA members are looking for integrated solutions taking into account meat quality (boar taint and other meat quality issues), animal welfare, management and production costs, and acceptance by stakeholders, consumers and citizens. The overall IPEMA objectives are to coordinate research to increase efficiency and to fill knowledge gaps between different areas in Europe as well as between science and stakeholders. Membership is opened to institutions and organisations. Figure 1 below illustrates the current structure of the IPEMA consortium and the subdivision of the topics among the different working groups (WGs).

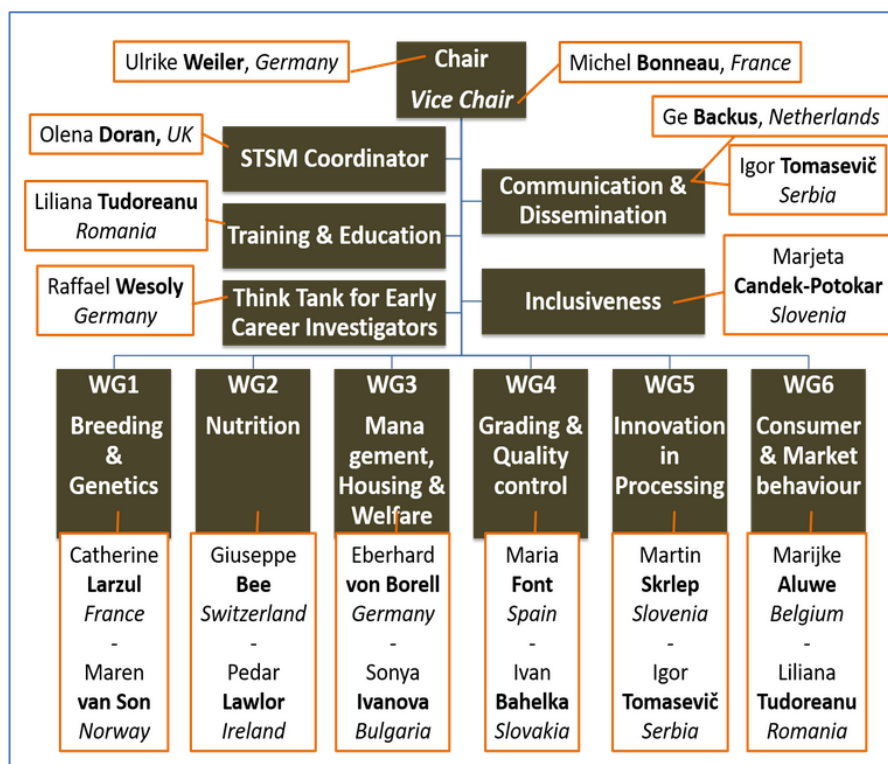


Figure. Organisation of IPEMA

PILOT on harmonizing of the EU market for pig meat from pigs who have not been surgically castrated

The Pilot project for the establishment of a harmonised internal market for pig meat obtained from pigs that have not been surgically castrated has been granted by the European Parliament and is expected to start early 2018. The aim of the pilot project is to bring major stakeholders together – slaughterhouses, food processors and retailers, and involving farmers as needed – and foster the sharing and dissemination of techniques and best practices that eliminate the need to castrate pigs surgically. Emphasis will be given to knowledge transfer activities concerning: (a) reliable and viable boar taint detection methods and (b) utilization of boar tainted carcasses during processing and (c) marketing and valorisation of meat from pigs that are not surgically castrated. Trust building and exchange of information among all market parties in a peer-to-peer environment will be an important communication activity. The project will deliver a practice-based guidance document paving the ground for a harmonised internal market for pig meat obtained from animals that are not surgically castrated. The pilot project will accelerate the process by providing and disseminating practical solutions to commonly perceived problems among key operators of the pork chain, while also showcasing the associated economic and societal advantages of stopping with the surgical castration of pigs.

4. REFLECTION ON THE RESULTS

Even though goal of ending castration 2018 will not be reached, the declaration is an innovative and positive step facilitating communication between all stakeholders and has achieved some positive results, namely a certain proportion of pigs being castrated with pain relief and in a few countries a substantial increase in the raising of entire boars or the use of immunocastration.

The declaration also delivered:

1. A 1st progress report published in 2014
2. A roadmap prepared in 2015 clearly outlining the necessary actions and next steps to be taken to drive further progress;
3. A communication and information plan in 2017, also meant to increase impact of the current findings and progress;
4. (The dissemination of the results of) several important/large-scale research projects (e.g. CAMPIG, CASTRUM) funded by Commission;
5. A decreasing number of castrated pigs, and more stakeholder awareness in general

The expert group is now working on (1) a list of products and protocols used for anesthesia and analgesia, (2) establishing stronger connection with the IPEMA COST action program, and (3) investigating the options concerning inclusion in the EU animal welfare platform.

We also still need to work on the following aspects:

- Instrumental methods of boar taint detection;
- the distribution of costs and benefits along the value chain;
- how to position the products obtained from non-castrated pigs on the internal and international meat market;
- preparing a list of traditional products requiring heavier pigs, for which more research is required to establish which alternatives to surgical castration can guarantee meat quality;
- availability of effective and practical analgesic and anaesthetic protocols for on-farm use across European countries;
- effective communication and dissemination of the knowledge and expertise already developed within the pork value chain for different products.

The expert group has by now established a broad network bringing stakeholders together to work on different areas (business, science, society, policy), sometimes with diverging interests, but in a collaborative context that facilitates the creation of common ground. Progress has not been made as fast and as far as it may have been expected when the European Declaration was signed. At present the expert group is lacking the human and financial resources to go faster in pursuing the objectives of the European declaration. The market and retailers also don't appear to be ready for a transition at EU level at the moment. But we need support for our work to help us to get to the next level and acceptance of the specified animal welfare aspects in the declaration.

Appendix 1: European Declaration on alternatives to surgical castration of pigs

On the invitation of the European Commission and the Belgian Presidency and following a workshop on alternatives for pig castration, representatives of European farmers, meat industry, retailers, scientists, veterinarians and animal welfare NGOs met in Brussels to discuss the issue of pig castration and its possible alternatives, and to consider the possibilities to end this practice. The working group met on 2 September, 13 October and 19 November 2010.

Surgical castration of pigs is an animal welfare concern. It has been scientifically proven, using physiological and ethological parameters, that surgical castration is a painful intervention even when performed on very young animals. Castration is practiced to avoid the development of undesirable sexual or aggressive behaviour, and to avoid the development of boar taint, since the expected taste and odour of pig meat is a very important aspect that consumers take into account when buying pork. Castration is not a producer's decision but a market driven choice. Castration always has an impact on the type, quality and quantity of meat and fat. On the other hand, non surgical castration has a positive impact on feed conversion and consequently, on the environment.

Different alternatives to surgical castration are already being applied in and outside the EU such as rearing of entire males or vaccination to reduce boar taint. In some countries castration is carried out with analgesia and/or anaesthesia in order to relieve pain. Several countries have already committed themselves to the long term phasing out of surgical castration of pigs. Some European retailers source pig meat from entire males, vaccinated male pigs or pigs which were surgically castrated with anaesthesia or analgesia. Since different approaches within the European Union could create problems for the functioning of the Internal Market and also for exports to third countries, a European wide approach and mutual recognition will facilitate trade in pig meat.

As a first step, from 1 January 2012, surgical castration of pigs, if carried out, shall be performed with prolonged analgesia and/or anaesthesia with methods mutually recognised. As a second step and in the long term, surgical castration of pigs should be abandoned by 1 January 2018. To ensure the implementation of the end of surgical castration the following tools shall be available and applicable:

- a) Mutually recognised methods for the assessment of boar taint;
- b) European recognised reference methods for the measurement of each of the compounds responsible for boar taint;
- c) Rapid detection methods for boar taint at slaughter plants;
- d) Reduction of boar taint compounds by pig breeding and/or management and feeding;
- e) The production systems and management of entire males during rearing, transport and at slaughter, to minimise sexual and aggressive behaviours.

The costs for implementing the end of surgical castration shall be shared between the economic actors of the chain. An annual public report shall assess the progress in the development and effectiveness of the tools mentioned above as well as the costs for castration and their sharing between the economic actors of the chain.

However, in the case of pig meat registered under "traditional specialties guaranteed" or with "geographical indications" (Protected Geographical Indication (PGI) or Protected Designation of Origin (PDO)) and pig meat produced for traditional high quality products to be listed in accordance with point 6, castration is unavoidable to meet the current quality standards.

To ensure a sustainable and competitive pig meat chain in the EU, a European partnership on pig castration, supported and funded by the European Commission, should be established in order to:

1. Ensure the acceptance of products from pigs not surgically castrated by the authorities and the consumers in the European Union but also in third country markets.
2. Agree on a common understanding of boar taint.
3. Perform or coordinate research and development and achieve results on:

- a) *mutually recognised methods for the assessment of boar taint;*
 - b) *European recognised reference method for the measurement of each of the compounds responsible for boar taint;*
 - c) *rapid detection methods for boar taint at slaughter plants;*
 - d) *reduction of boar taint compounds by pig breeding and/or management and feeding;*
 - e) *the production systems and management of entire males during rearing, transport and at slaughter to minimise sexual and aggressive behaviours;*
 - f) *alternatives to surgical castration with analgesia and/or anaesthesia in the case of pig meat registered under "traditional specialties guaranteed" or with "geographical indications" (Protected Geographical Indication (PGI) or Protected Designation of Origin (PDO)) and pig meat produced for traditional high quality products as listed in point 6.*
4. Develop information and training of farmers and other members of the whole pork chain.
 5. Launch a cost/benefit analysis on the consequences of the end of surgical castration, including an analysis of the change in production costs in various production systems, the costs/benefits affecting the different levels of the pork chain and the cost sharing plans between the economic actors of the chain.
 6. Develop a list of traditional productions requiring heavier pigs covered by the derogation mentioned above.
 7. Publish the above mentioned annual report. The report will also include a part on the costs for implementing the end of surgical castration and their distribution.

This declaration is drafted and signed by several actors in the European pig sector, European retailers and NGO's. The declaration is an open invitation for every actor in the European pig sector and European retailers to join this voluntary initiative. The European Commission and the Belgian Presidency act as facilitators to encourage private parties to subscribe to this declaration. We hereby call on everyone to join this declaration by publicly endorsing it.

Appendix 2: Signatories to the European Declaration

- [COPA-COGECA](#) (European farmers and European agri-cooperatives)
- [Eurogroup for Animals](#)
- [UECBV](#) (The European Livestock and Meat Trading Union)
- [CLITRAVI](#) (Liaison Center for the Meat Processing Industry in the European Union)
- [FESASS](#) (The European Federation for Animal Health and Sanitary Security)
- [EAAP](#) (European Federation for Animal Science)
- [EFFAB](#) (European Forum of Farm Animal Breeders)
- [FVE](#) (Federation of Veterinarians of Europe)
- [Danish Agriculture and Food Council](#)
- [DBV](#) (German farmer association)
- [VDF](#) (German meat industry association)
- [HDE](#) (German retail federation)
- [Scientific experts from INRA](#) (Institut National de la Recherche Agronomique)
- [COV](#) (Dutch red meat slaughterhouses)
- [LTO Nederland](#) (Dutch pig farmers organisation)
- [NVV](#) (Dutch pig farmers organisation)
- [NBHV](#) (Dutch livestock traders organisation)
- [ANAS](#) (Associazione Nazionale Allevatori Suini) - Italy
- [DMRI](#) (Danish Meat Research Institute)
- [OIVO](#) - CRIOC (Centre de Recherche et d'Information des Organisations de Consommateurs)
- [FEFAC](#) (European Feed Manufacturers' Federation)
- [CIWF](#) (Compassion in World Farming)
- [The Dublin Society for Prevention of Cruelty to Animals](#) – Republic of Ireland
- [Finnish Farm Animal Welfare Council](#)
- [Galician Meat Technology Centre](#) – Spain
- [Dutch Society for the Protection of Animals](#)
- [PROVIEH VgtM e.V.](#) – Germany
- [SCIENTIFIC EXPERT from IFIP](#) - "Institut du porc en France"
- [PMAF](#) - Protection Mondiale des Animaux de Ferme
- [Soil Association](#), UK
- [ANPROGAPOR](#), Spain
- [Le Centre Wallon de Recherches agronomiques](#)
- [Dyrenes Beskyttelse](#) (Danish Animal Welfare Society)
- [Comité Régional Porcin de Bretagne](#) (CRP Bretagne)

Appendix 3. Survey questions to the country experts

Dear colleagues,

The Expert Group of the European Declaration on alternatives to the surgical castration of pigs has decided to update the progress report that has been finalized in 2015 (the progress report is attached). Therefore we ask for your help.

We do need your support in updating the country specific information on the developments in your country since 2014.

We would really appreciate it if you give an answer to the following country specific questions, preferably within two weeks.

1. Is castration an issue that regularly attracts media attention in your country
Yes often, Yes sometimes, Not often, Never
and if yes does this attention increase or is it stable?
Increase, Stable, Decrease
2. Can we say that there is a sense of urgency for the pig sector to work towards ending surgical castration?
Yes, Some, Not really
3. Are there, to the best of your knowledge, retailers in your country that are involved in activities aimed at ending castration?
Yes several, Yes some, Not really, I do not know
4. If the answer was yes, could you list those retailers, and the relevant initiatives?
5. Have there been accepted legislative measures in this field, and if so please specify them including the year it will be into effect?
6. Please do take a look at the data in the annex and update them for your country, if they are not correct anymore
7. Do universities in your country have research projects on the topic of castration?
Please explain
8. Does the government subsidize or compensate farmers, e.g. financial compensation for using anaesthesia and or analgesia?
No, I do not know, Yes + explanation
9. Have there been any other relevant developments towards ending castration of piglets in your country?
Free text

Again, thanks a lot for your help and looking forward to receiving your update.