Initiatives to reduce mutilations in EU livestock production

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LIVESTOCK RESEARCH
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De moderne commerciële veehouderij maakt gebruik van pijnlijke ingrepen voor runderen, schapen, geiten, paarden, varkens en pluimvee. Dit rapport analyseert wettelijke en niet wettelijke initiatieven (vanuit overheid en markt) om ingrepen te reduceren in de EU. Succesvolle en minder succesvolle voorbeelden werden geïdentificeerd, en leiden tot zes algemene aanbevelingen ter bevordering van het terugdringen van ingrepen: er moet een gevoel van urgentie zijn, overeen gekomen regels vereisen handhaving, technische oplossingen zijn nodig voor technische problemen, een 'vangnet' moet risico's verkleinen, commitment moet worden gedeeld door alle betrokken ketenpartners en als wetgeving tekort schiet, kan de markt het verschil maken.

Conventional livestock production involves mutilations of animals. This report analyses legislative and non-legislative initiatives (by governments as well as the market) in the EU to reduce these practices in cattle, sheep, goats, horses, pigs and poultry. Successful and less successful examples were identified, and lead to six general recommendations: there needs to be a sense of urgency, agreed rules require enforcement, technical solutions are required to technical problems, 'safety nets' are needed to reduce risks, commitment needs to be shared by all chain partners involved and if legislation is unlikely to be successful, the market may help to make a change.

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Foreword

Beak trimming, tail docking, disbudding and a considerable number of other mutilations are carried out every day in animal production systems in Europe. These practices are generally considered to be necessary, performed to avoid negative 'side effects' of our husbandry systems such as danger to humans or injuries to other animals. This report provides a comprehensive overview of all mutilations practiced in the main terrestrial farmed species, and presents legislative and non-legislative measures which attempt to reduce their occurrence.

It could not have been written without the help of a large number of people in different European member states. The authors have gratefully received contributions from virtually all ministerial departments dealing with welfare legislation in the different member states. They have submitted legislative texts and checked the wording in the tables of this report. For the non-legislative initiatives, information was requested and received from nearly 50 animal welfare scientists and other stakeholders in different EU member states. Collectively they've provided an insight into the priorities of our current meat, milk and egg chains, when it comes to banning mutilations. Finally, it should be acknowledged that this report would not have been possible without the help from Elena Nalon (Eurogroup for Animals), Bert van den Berg (Dierenbescherming) and Léon Arnts and Yvonne Kleintjes (Ministry of Economic Affairs), as well as the discussions with Sebastiaan van Lunteren and Sanne van Zanen.

On behalf of the authors I would like to thank all these people for their contributions to this overview.

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Executive summary

Introduction

Conventional livestock production involves mutilations of animals. The main aim of this report is to support a reduction of these mutilations in cattle, sheep & goats, horses, pigs and poultry. The sub-aims are: a) identifying and listing legislative and non-legislative measures which encourage the reduction of mutilations; b) describing and analysing backgrounds to a selection of initiatives related to 5 'focus mutilations': tail docking in pigs and sheep, dehorning in cattle, castration of pigs and beak trimming of poultry; c) suggesting critical success factors for initiatives to reduce mutilations in European livestock production.

Materials and methods

The data in this report were collected through literature review, email and telephone consultation of experts and through discussions within and outside the group of authors. There were two main parts in the development of this report: firstly an inventory of the legislative situation in each member state, followed by the collection of examples of non-legislative initiatives. The report presents the legislative and non-legislative measures as well as the focus mutilations by species.

Cattle

For cattle there is no specific EU legislation to reduce mutilations, but there are recommendations from the Council of Europe (CoE), adopted in 1988[1]. These recommendations allow mutilations such as hot and freeze branding, castration, dehorning, disbudding, ear notching, nose ringing, vasectomies and chipping. The CoE recommendations suggest to forbid tail docking, the removal of extra (small) teats and routine caesarean sections. Regarding individual member state legislation, the following conclusions can be drawn:

- ➔ Some countries indicate that even though hot and freeze branding are allowed, it is not common practice. It is possible that this is a reason why so few countries have officially banned this practice.
- ➔ It appears that castration, dehorning, disbudding and vasectomies are deemed essential. It is unlikely they will be banned through legislation in the near future.
- ➔ Ear notching of cattle may not be as widely applied as the absence of a ban through national legislation of member states may suggest.
- ➔ It appears that the welfare disadvantages of applying nose rings in cattle are perceived not to outweigh the advantages for human safety.
- ➔ Tail docking of cattle is banned by almost all member states (MSs).

The examples found of non-legislative initiatives for cattle are all related to quality assurance schemes. Initiatives in only 6 countries were found (DE, DK, SE, UK, EI and NL), and three mutilations were mainly addressed: castration, dehorning and disbudding. For these painful procedures (castration, dehorning, disbudding), the schemes promote pain relief, rather than a ban. Regarding the focus mutilation of dehorning (and disbudding), it can be concluded that there is no sense of urgency to either change the law or ban the practice through non-legislative initiatives. The breeding of polled cattle could provide a practical solution.

[1] Plans to revise the CoE recommendations on cattle have until now not come further then a draft in November 2009.

Sheep and goats

For sheep and goats the legislative situation is comparable to cattle: no specific EU legal requirements exist, but the Council of Europe (CoE) did issue recommendations (adopted in 1992). According to these, castration, dehorning, ear notching, tail docking, vasectomies, caesareans and chipping should be allowed. Mulesing and the removal of extra (small) teats should be forbidden. Disbudding is recommended to be allowed in goats, but not in sheep.

- ➔ Chipping and ear notching are allowed by the majority of member states.
- ➔ There is general agreement that it should be allowed to perform castration, tail docking, dehorning and vasectomies: there are only a few bans. If there are restrictions, they focus on the operator: in a small number of MSs the CoE recommendations are followed and the operator should be a veterinarian.
- ➔ Mulesing, disbudding, removal of excess small teats and routine caesarean section are generally not accepted by EU member states

Nine examples of non-legislative initiatives related to sheep and goats were found, and they are all related to quality assurance schemes. When it comes to market initiatives, there is little incentive outside NW Europe to promote the welfare of sheep and goats. It appears accepted that even the most painful procedures such as castration and dehorning are essential in commercial sheep and goat farming. The main initiatives do not appear to see any commercial or ideological advantage in a ban of the main sheep and goat mutilations, if they are not already banned by their national legislation. In the present report, tail docking is the focus mutilation for this species. Similar to dehorning in cattle, there seems to be little sense of urgency among stakeholders and industry partners. Again, to breed animals which are less likely to be fly struck seems a possible way forward, in combination with management practices to promote hygiene (and make tail docking unnecessary).

Horses

For horses there is no EU legislation other than that related to identification, which effectively allows chipping, and hot and freeze branding. No references were found to e.g. tail docking or castration of horses. An analyses of the legislation in the MSs suggests the following:

- ➔ There is no reason to assume that the rules on chipping and castration of horses will be tightened in the EU member states in the near future.
- ➔ There are arguments for and against the banning of hot and freeze branding. MSs do not agree, and have no common approach.
- ➔ Tail docking appears to be the most controversial mutilation of horses. 12 Member States forbid tail docking. The arguments in favour and against it should be discussed, and opportunities to ban the practice across Europe explored.

No examples of non-legislative initiatives to reduce mutilations in horses were found.

Pigs

For pigs rules regarding painful procedures are laid down in Council Directive 2008/120/EC. Castration, ear notching, nose ringing of outdoor pigs, vasectomies, tattooing and chipping are allowed. Tail docking and teeth cutting are allowed, but not as a routine practice. We compared these rules to the legislation in the 28 MSs.

- ➔ European legislators in different MSs agree on allowing chipping, vasectomising, tattooing and castration.
- ➔ Recent developments regarding castration indicate an increased sense of urgency to ban this practice in Europe.
- ➔ Routine needle teeth cutting and tail docking are banned by all MSs, but the practice of docking is performed on the majority of pigs in Europe (and needle teeth cutting is also applied om a considerable number of pigs) . It appears that the enforcers of national legislation agree that the advantages of tail docking and teeth cutting still outweigh their disadvantages.
- ➔ There does not seem to be legal pressure on the banning of ear notching and nose ringing.

We identified 19 examples of initiatives to reduce mutilations of pigs in Europe, almost all of which are related to quality assurance schemes. They involve only 5 MSs, with Germany having the largest share of initiatives. Means to identify pigs (notching, chipping, tattooing) are hardly referred to in the examples found. Vasectomies are not mentioned. The schemes mainly refer to four practices: tail docking, castration, reduction of teeth and nose ringing, and mainly aim for a complete ban.

Regarding the focus mutilation of surgical castration it is clear that there is a sense of urgency throughout the industry to ban this practice. In the Brussels declaration of 2011 European stakeholders agreed to end surgical castration in pigs throughout the EU in 2018. They placed emphasis on the market to solve the issue. Since then it appears that although progress has been made, most of the EU countries have to take significant further steps to meet the self-imposed schedule of the declaration. More efforts have to be made by all signatories to realise their ambitions.

The second focus mutilation of routine tail docking has received less attention at the European scale, but this appears to be changing. Quality assurance schemes seem to agree that the practice can be banned, and there is also a German initiative to subsidise undocked intact tails. There appears to be consensus that providing practical support to farmers through training and innovative solutions is essential to stop routine docking, without risking problems of tail biting and cannibalism.

Poultry

For broilers the EU legislation does not refer to any specific mutilations. For laying hens the minimum standards for protection are laid down in Council Directive 1999/74/EC. The legislation only refers to beak trimming specifically, and allows member states to authorise it. De-toeing and dubbing are mentioned in Council of Europe recommendations of 1995, and they recommend to allow them. Pinioning is not mentioned specifically, but appears to be banned in the recommendations as well as the legislation, since it is not mentioned as an exception to the rule that all mutilations of birds shall be prohibited.

- ➔ Beak trimming is allowed almost throughout the entire EU.
- ➔ There appears to be more concern about dubbing compared to de-toeing in the different member states, as it is mentioned more often by them.
- ➔ There are three member states which allow pinioning. This raises the question whether their legislation is in compliance with the EU directive.

We found 18 examples of non-legislative initiatives, concentrated in 6 European member states: AT, DE, FR, NL, SE and UK. De-toeing, dubbing and pinioning are hardly referred to (possibly because these mutilations are not commercially relevant).
The majority of examples refer to the focus mutilation 'beak trimming', by banning it. It is remarkable that a practice which is allowed throughout the EU, is banned by virtually all quality assurance schemes aiming to improve animal welfare. However, the fact that lower tiers of important schemes still allow beak trimming suggests that in their perception a ban on trimming may have severe consequences for either the welfare of the birds involved or the viability of the scheme (or both!).
There are at least two examples of initiatives which on a large commercial scale are successful in banning beak trimming. The Austrian KAN certification has dramatically reduced the incidence of cannibalism by untrimmed hens on a national scale, basically through practical support to farmers who stopped trimming. In the Netherlands, the Rondeel system appears to successfully apply an innovative housing and management concept to end beak trimming without increasing feather pecking.

Recommendations

Although the present study did not assess the impact of the various initiatives, the data collected and interviews conduct allow for the following critical success factors to be hypothesised:

- ➔ A sense of urgency: there must be a desire to change, shared by decision makers and other stakeholders
- ➔ Adequate enforcement of the agreed rules and legislation, as rules which are not complied with are pointless
- ➔ Technical solutions to provide answers to technical problems: science and practice should work together on new approaches to reducing the welfare impact, alternatives to the mutilation, or ways to avoid the negative consequences of stopping the procedure.
- ➔ A 'safety net', to provide financial or technical support to farmers and avoid disasters if things go wrong
- ➔ Commitment by all: long term investments for change, require long term commitments by all parties involved. This may facilitate structural changes to livestock production systems, which in several cases are at the heart of the problem.
- ➔ Legislative solutions do not always appear to be essential, but if they are lacking, market support is needed to make a change.

1 Introduction

Conventional livestock production involves management procedures which are painful to animals and effectively change the appearance of the animal. For the purpose of this report we will refer to them as 'mutilations', defined in the Dutch law (the 'Wet Dieren') as "a physical intervention in an animal in which the natural integrity of living tissue is broken". In our research we excluded surgical operations to remedy health problems in animals, and which are performed on an individual, non-routine basis. The main aim of this report is to provide information to support a reduction of the occurrence of mutilations applied to cattle, pigs, sheep, horses and poultry in livestock husbandry.

The majority of these mutilations are either applied for identification purposes, or to avoid animals damaging each other. But there are several other reasons why these procedures are applied. Based on Stafford and Mellor (2009), the following list can be produced:

- to minimize the risk of injury to animals and people (e.g. dehorning, beak trimming);
- to aid in identification (e.g. ear marking or notching, branding);
- to reduce aggressive behaviour and make male animals easier to handle (e.g. castrating oxen);
- to prevent carcass damage such as bruising (e.g. dehorning);
- to enhance carcass quality (e.g. castration of pigs);
- to reduce the risk of flystrike (e.g. mulesing in sheep);
- to allow other husbandry practices (e.g. shearing) to be undertaken more quickly and efficiently (e.g. tail docking);
- to prevent the effects of aggression related to the living conditions of livestock (e.g. problems with climate, feeding, health, space, distraction);
- to prevent damage to the environment (e.g. nose ringing in pigs); and
- to enable the harvesting of products (e.g. velvet removal of deer antlers, routine caesareans in certain beef cattle).

The use of mutilations in livestock farming is rather common. Tail docking for example is applied in nearly 100% of European pigs (EFSA, 2007a). Beak trimming is applied throughout Europe (Fiks-Van Niekerk and De Jong, 2007). It is a legal requirement to ear tag all cattle. Nose rings are applied to the majority of sows kept outdoors (Mul et al., 2010). The methodologies applied are usually chosen for practical reasons: they have to be quick, cheap and effective. Mutilations always involve a degree of pain.

Article 13 of the European Convention of Lisbon recognises that animals are sentient beings (Anon., 2007), and as a consequence of this it must be assumed that animals perceive the pain inflicted on them through mutilations. In the Dutch animal welfare law (Wet Dieren) it also says that animals are beings with an intrinsic value, and sentient beings. The law asks to take full account of this notion when taking legislative decisions, without disregarding other justifiable interests. This notion has direct implications for how we treat animals, including any painful management practices we apply. It is generally agreed that even though we may still need to apply mutilations in farming practice, their use should be minimised and the pain inflicted proportional to the benefits to humans and animals.

A reduction of mutilations and their painful consequences can be achieved in several ways. Firstly, by removing the need to perform the practice: if farms can be designed in which laying hens do not feather peck, then there is no need to beak trim them. Secondly, by providing alternatives to the painful practice: if cattle can be bred without horns, they do not need to be disbudded any more. Finally, by modifying the practice in such a way that it is the least painful to the animal: immuno-castration involves two injections of a vaccine and eliminates the need to surgically castrate the pigs.

There are several reasons why these and other solutions to the problem of mutilations are not widespread throughout the livestock industry. This report will not go into these reasons, but instead focus on measures to increase the uptake of these solutions by the farming community.

The main aim of the present report therefore is to support a reduction of the occurrence of mutilations applied to cattle, pigs, sheep, horses and poultry. It aims to do so by

- Identifying and listing measures which encourage the uptake of solutions;
- Describing and analysing initiatives related to a subset of 5 mutilations: tail docking in pigs and sheep, dehorning in cattle, castration of pigs and beak trimming of poultry;
- Suggesting critical success factors for initiatives to reduce mutilations in European livestock production.

In this report the results will be presented by species, addressing the legislative and non-legislative measures in tables and discussing the relative impacts for the subset of 5 procedures.

2 Materials and Methods

The data in this report were collected through literature review, email and telephone consultation of experts and through discussions within and outside the group of authors. There were two main parts in the development of this report: we started with an inventory of the legislative situation in each member state, and followed it up with the collection of examples of non-legislative initiatives.

2.1 Collating the overview of EU and member state legislation

In December 2014 the authors sent an email to 42 policy maker responsible for animal welfare at the ministries of the 28 EU member states. In the mail, details were asked of national legislation related to painful management procedures. It was also asked if additional regulations or policy initiatives exist in these countries, including regulations & initiatives to waive certain mutilations.

By June 2015 information was received from 15 member states, and it was possible to compile an overview of their national legislation compared to the EU legislation or Council of Europe recommendations. It was decided to approach them again, to present a summary of the findings and ask them to check it.

In addition, thirteen member states where approached who had not respond by 1st June, with an email to suggest that their legislation is equal to the EU rules or guidelines, and asked for their comments to that.

By October 1st there were still six member states from which no reply was received: CY, CZ, LU, MT, SI and RO. These replies were not pursued any longer, and the authors included their own interpretation in the tables of this report. These interpretations should be treated with caution.

2.2 Preparing an overview of non-legislative initiatives

The email to the policy makers also included a request to submit any available information on non-legislative means to reduce mutilations. This resulted a relatively low level of response, and in August 2015 we approached 47 people working in the field of animal production, from 20 European member states. The majority of recipients (37) were researchers in animal welfare or related areas of science, and 10 belonged either to an animal welfare NGO or a farmer's representative group. Seven came from Southern European countries (Greece, Italy, Spain), 18 from Western Europe (UK, Ireland, Belgium, France or Germany), 13 from Eastern Europe (Bulgaria, Croatia, Poland, Slovenia, Slovakia, Czech Republic, Estonia, Hungary or Latvia), and nine from the North (Denmark, Finland or Sweden). The email asked if they know of any commercial labels, niche products or other non-legislative and marketing initiatives in their country which explicitly include measures to reduce or stop painful management procedures. It then proceeded to request the name for this initiative, product or label, what management procedure it is aiming to reduce and for which species.

Over 50 suggestions were received, mostly accompanied by internet addresses to facilitate further investigation. The main focus of the literature study was to identify the exact requirements of a particular initiative regarding painful management procedures. Initiatives which did not specifically address mutilations were removed from the list. The remaining initiatives were then categorised by target species, and overview tables were prepared to present them.

For each of the 5 Focus Mutilations, three initiatives aiming to reduce the practice were selected for an interview. The selection was based on geographical considerations (preferably located in different countries), and their perceived impact (large initiatives were preferred). We included organic schemes as well as non-organic schemes. Table 2.1 presents the initiatives chosen.

Table 2.1.
Overview of initiatives selected for a telephone interview

Beak trimming (chicken)		
1.	Was steht auf dem Ei?	Germany
2.	Beter leven	The Netherlands
3.	Austrian poultry farming	Austria
Castration (pigs)		
1.	Velfærdsdelikatesser	Denmark
3.	Initiative Tierwohl	Germany
4.	Keten Duurzaam Varkensvlees	NL
Dehorning (cattle)		
1.	Beef and Lamb Quality Assurance Scheme	Ireland
2.	Beter Leven	The Netherlands
3.	Svenskt Sigill	Sweden
Tail- docking (pigs)		
1.	Velfærdsdelikatesser	Denmark
2.	Ringelschwanzprämie	Germany
3.	RSPCA Assured	UK
Tail- docking (sheep)		
1.	Beef and Lamb Quality Assurance Scheme (BLQAS)	Ireland
2.	Svenskt Sigill	Sweden
3.	RSPCA Assured	UK

For each of these initiatives, a contact person was sought and approached for a telephone interview in the period November and December 2015. The interviews were aimed at gaining a better understanding of the incentives for farmers to join the initiative, and the strengths and weaknesses of non-legislative initiatives in general. It was not intended to present and discuss each of these initiatives separately in this report.

2.3 Conclusions and recommendations

Based on the examples found and telephone discussions with the representatives of initiatives, a table with the various legislative and non-legislative initiatives was produced for each of the Focus Mutilations. The table aimed to summarise the status, strengths and weaknesses of the main routes identified to reduce mutilations. The authors also propose a conclusion regarding each of these initiatives.

3 Mutilations related to cattle

3.1 European legislation

There is at present no EU-legislation specifically on mutilations in cattle. This is rather different compared to pigs and poultry, for which species specific EU Regulations on mutilations do exist. Although this specific legislation is lacking, there are Council of Europe recommendations concerning cattle, adopted by the Standing Committee of the European Convention for the Protection of Animals kept for Farming Purposes (21 October 1988), which are regarded as part of EU's acquis. They can be found at: http://www.coe.int/t/e/legal_affairs/legal_co-operation/biological_safety_and_use_of_animals/farming/Rec%20cattle%20E.asp. [2]

Articles 17 and 18 refer to the use of painful procedures. In general, "Procedures resulting in the loss of a significant amount of tissue, or the modification of bone structure of cattle shall be forbidden". Art. 17.1 goes on to refer specifically to tongue modifications, dehorning other than through surgical means and tail docking. However, there are exceptions, and in Art. 17.2 it is stated that these procedures can a) be performed for veterinary purposes, b) in the interest of the animals or human safety (disbudding, surgical dehorning and nose ringing), or c) only if necessary and under strict conditions (castration, spaying and notching or punching of ears). The next articles then address the use of anaesthesia (Art. 17.3: spaying, dehorning, disbudding, castration and vasectomy), and conditions to avoid unnecessary pain when anaesthesia is not required (disbudding, nose ringing and notching or punching ears). In Article 18 the marking of cattle for identification is addressed: "toxic materials should be prohibited and caustic paste or hot irons shall only be used when an absolutely permanent identification for special purposes (for example animal disease control) cannot be achieved by other methods".

In Appendix B (Special provisions for cows and heifers) a reference to caesarean sections is made in Art. 13: "Caesarean operations shall be carried out by a veterinary surgeon and only in the interest of individual animals and not as a routine measure".

3.2 Legislation per EU member state

For cattle a total of 11 painful procedures were identified and their legislative status was compared for the 28 member states in Table 3.1.

Freeze or hot branding

Both are allowed according to the Council of Europe (CoE) recommendations, but hot iron branding only when permanent identification in special circumstances cannot be achieved otherwise (for example for disease control).
The majority of the 28 members states allow both hot and freeze branding, although some respondents indicate that neither are an official means of identification in cattle: for that purpose ear tags should be used. There are 5 member states which allow freeze branding but not hot branding: Ireland, Belgium, Sweden, The Netherlands and the UK (England, Wales, and Scotland only, so not Northern Ireland). Two member states have banned both types of identification: Austria and Germany. The Netherlands intend to follow this example in June 2016. EFSA (2007b) considers hot branding to be considerably more painful than freeze branding.

[2] Plans to revise the CoE Recommendations on the welfare cattle have not come further then a draft of November 2009 and then the work was stopped. It is unknown if and when it will be continued.

➔ Some countries indicate that even though branding is allowed, it is not common practice (e.g. Lithunia). It is possible that this is a reason why so few countries officially ban this practice.

Castration, Vasectomy, Dehorning and Disbudding

The CoE recommendations indicate that these procedures should only be applied in combination with the use of anaesthesia and by a veterinary surgeon or other qualified person. They are allowed by all member states, with some respondents stressing the importance of using anaesthetics and least pain inflicting procedures.
For disbudding there are some exceptions. The CoE indicates that disbudding can be applied under the age of 4 weeks without anaesthesia, but only when using appropriate techniques like chemical and thermal cauterisation. Some member states specify a maximum age at which disbudding may take place: Denmark: up to 3 months; Netherlands and Belgium: up to two months; Hungary on the first day only.
Vasectomies are allowed in all members states, but some respondents stress it may only be performed by a veterinary surgeon.

➔ It appears these procedures are regarded as essential by the legislators. It seems unlikely they will be banned through legislation.

Ear notching and Chipping

The CoE recommendations allow the use of ear notching and chipping as a means of identification. Almost all member states follow these recommendations. There are some exceptions: Austria, Germany, Hungary, Sweden and The Netherlands have banned ear notching. Chipping is allowed in all member states. One respondent (from Latvia) indicated that although allowed, ear notching is not common practice.

➔ Although not banned, it is possible that ear notching of cattle is not widely applied.

Nose ringing

Three members states indicate that in contrast to the CoE recommendations, they do not allow nose ringing for both cows and bulls in general, but for breeding bulls only. These are Austria, Belgium and The Netherlands. The only member state which has a complete ban on nose ringing of cattle is Germany.

➔ It appears that in the majority of countries the welfare disadvantages of applying nose rings in cattle are perceived by legislators not to outweigh the advantages for human safety.

Tail docking

The CoE recommends that tail docking of cattle should be banned, and almost all member states agree with this position, and have included a ban in their legislation. Notable exceptions are Germany (tail docking allowed for male cattle less than 3 months old), Austria (in calves but not to a length less than 5 cm) and in Northern Ireland (which allows it, providing the operation is performed by a veterinarian).

Removal of super numerous small teats

Most member states ban the removal of super numerous small teats. The CoE recommendations do not specifically mention this procedure, but it can arguably be understood to fall under art. 17 "the loss of a significant amount of tissue", and thus banned. The member states which indicate that these teats can be removed are: Belgium, Hungary (only for animal health reasons), Sweden (only under the age of 1 month), the UK (in Northern Ireland only if performed by a veterinarian), The Netherlands (under the age of 2 months), Denmark (removal for veterinary reasons only) and Finland (very small surplus teats only).

➔ The difference in approach between MS suggests there are arguments for and against this mutilation. This can be further explored to see if better alignment of this practice across EU member states can be achieved.

Routine caesareans

The CoE recommendations state that caesareans should not be applied routinely, and only applied by a veterinarian in the interest of the animals. This view is adopted by most MS. Only a small number of countries allow them to be performed routinely: Belgium, The Netherlands, Northern Ireland and Lithuania. Hungary also allows routine caesareans but the respondent states that it is not practiced there.

➔ The use of caesareans on a routine basis is closely linked with the production of beef from double muscled cattle breeds. It appears that a ban would need to include alternative solutions to protect the welfare of these animals.

Table 3.1.

A comparison of the legislation on painful management procedures in cattle husbandry of 28 EU member states and the recommendations of the Council of Europe (1988).*

Green:	MS appears more strict than CoE
Grey:	MS appears comparable to CoE
White:	MS appears less strict than CoE

Procedure	Freeze or hot Branding	Ear notching	Chipping	Dehorning	Disbudding	Nose ringing	Tail docking	Removing of super numerous small teats	Castration	Vasectomy	Routine caesarean sections
CoE position	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
CoE (1988) article	Article 18: hot irons shall only be used when permanent identification cannot be achieved by other means.	Article 17 4 c:	Article 18:	Article 17 2 b ii:	Article 17 2 b i:	Article 17 2 b iii:	Article 17 1 c:	Article 17: "procedures resulting in the loss of a significant amount of tissue" (but removing teats is not explicitly referred to).	Article 17 2 c i:	Article 17 3:	Appendix B point 13: routine ceasarians are not allowed. (Caesareans only in the interest of animals).
Austria	Forbidden, due to the possibility to ear marking and chipping.	Forbidden: notching, clipping or punching the ear of an animal. Tagging is possible.	Allowed	Allowed	Allowed	Allowed. Nose rings may only be applied to breeding bulls.	Allowed: in calves and to a maximum of 5.00 cm.	Forbidden	Allowed	Allowed	Forbidden
Belgium	Hot branding is forbidden, cold branding is allowed	Allowed	Allowed	Allowed, but only applied if necessary for the safety of personnel or other animals	Allowed, but only by means of thermocaute risation up to the age of 2 months	Allowed, but only for bulls.	Forbidden	Allowed: removal of extra teats by surgical method or by use of haemostatic pliers	Allowed	Allowed	Allowed
Bulgaria	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden

Procedure	Freeze or hot Branding	Ear notching	Chipping	Dehorning	Disbudding	Nose ringing	Tail docking	Removing of super numerous small teats	Castration	Vasectomy	Routine caesarean sections
Croatia	Allowed	Allowed by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Forbidden	Forbidden	Allowed by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Forbidden
Cyprus	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Czech Republic	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Denmark	Allowed	Allowed	Allowed	Allowed, to be carried out by a veterinarian , and the animal shall be given an anaesthetic. Exception for calves below 3 months	Allowed, disbudding of calves below three months may be carried out by the farmer on a number of conditions.	Allowed	Forbidden, except for veterinary medicinal purposes.	Allowed: removing teats is allowed for veterinary reasons.	Allowed, calves within 4 weeks can be castrated by farmer using a Burdizzo provided anaesthesia and long lasting analgesia	Allowed	Forbidden
Estonia	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Finland	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Allowed for very small surplus teats, otherwise only a veterinarian is allowed to remove them	Allowed	Allowed, but only when performed by veterinarian s	Forbidden

Procedure	Freeze or hot Branding	Ear notching	Chipping	Dehorning	Disbudding	Nose ringing	Tail docking	Removing of super numerous small teats	Castration	Vasectomy	Routine caesarean sections
France	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden, except for veterinary medicinal purposes.	Forbidden	Allowed	Allowed, but shall be carried out by a veterinarian	Forbidden
Germany	Forbidden	Forbidden (ear tagging allowed)	Allowed	Allowed if done by veterinarian and with anaesthesia	Allowed for animals under 6 weeks of age	Forbidden (when connected to tissue injury)	Allowed: male cattle less than 3 months old by using a flexible ring	Forbidden	Allowed	Allowed if done by veterinarian	Forbidden
Greece	Allowed.	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Hungary	Allowed without anaesthesia only for Hungarian grey cattle. Annex 6 to Decree 32/1999 (III. 31.)	Forbidden. Act XXVIII of 1998 on the Animals Welfare, paragraph (2) and (3) of 10	Allowed. Act XXVIII of 1998 on the Animals Welfare, paragraph (3) of 10. But: it is not in practiced in Hungary.	Allowed. Annex 6 to Decree 32/1999 (III. 31.) Without anaesthesia , only in 1 day old age, with bloodless method.	Allowed. Annex 6 to Decree 32/1999 (III. 31.) Without anaesthesia, only in 1 day old age, with bloodless method.	Allowed without anaesthesia only for Hungarian grey cattle. Annex 6 to Decree 32/1999 (III. 31.)	Forbidden for changing appearance of the animals. Act XXVIII of 1998 on the Animals Welfare, paragraph (2) of 10. §	Allowed: only for animal health reason – Annex 6 to Decree 32/1999 (III. 31.)	Allowed. Act XXVIII of 1998 on the Animals Welfare, paragraph (2) of 10. §	Allowed. Act XXVIII of 1998 on the Animals Welfare, paragraph (2) of 10. §	Allowed (not named by the legislation). But not practiced in Hungary.
Ireland	Allowed: freeze branding Forbidden: hot iron branding.	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Allowed	Allowed	Allowed	Forbidden
Italy	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Latvia	Allowed	Allowed, but not used as identificatio n method	Allowed	Allowed, if performed by a veterinarian	Allowed, if performed by a veterinarian	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden

Procedure	Freeze or hot Branding	Ear notching	Chipping	Dehorning	Disbudding	Nose ringing	Tail docking	Removing of super numerous small teats	Castration	Vasectomy	Routine caesarean sections
Lithuania	Allowed (but not officially recognised means of identification)	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed, however, forbidden to castrate with elastic rubber bands.	Allowed	Allowed
Luxembourg	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Malta	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Netherlands	Allowed: freeze branding (intend to ban 1 June 2016); Forbidden: hot branding	Forbidden	Allowed	Allowed, but only on instruction of the veterinarian (and after local anaesthesia by the vet (Art. 2.28 lid b Besluit houders van dieren).	Allowed, but only on instruction of the veterinarian (and after local anaesthesia by the vet), and under the age of 2 months	Allowed for breeding bulls, where the safety of the farmer is at risk.	Forbidden	Allowed is the removal of extra teats under the age of 2 months (Art 2.1. lid d of Besluit diergeneeskundigen)	Allowed	Allowed, but only allowed to be executed by a veterinarian.	Allowed: routine caesareans but only to be executed by a veterinarian.
Poland	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Portugal	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Romania	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Slovakia	Allowed	Allowed	Allowed in accordance with the National Legislation (Art 19 1 of the Act No 39/2007)	Allowed in accordance with the National Legislation (Art 22 2 b of the Act No 39/2007)	Allowed in accordance with the National Legislation (Art 22 2 b of the Act No 39/2007)	Allowed	Forbidden	Forbidden	Allowed in accordance with the National Legislation (Art 22 2 b of the Act No 39/2007)	Allowed in accordance with the National Legislation (Art 22 2 b of the Act No 39/2007)	Forbidden
Slovenia	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden
Spain	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed	Forbidden

Procedure	Freeze or hot Branding	Ear notching	Chipping	Dehorning	Disbudding	Nose ringing	Tail docking	Removing of super numerous small teats	Castration	Vasectomy	Routine caesarean sections
Sweden	Forbidden: hot banding, Allowed: freeze branding	Forbidden: cuttings are not allowed.	Allowed. Microchip is allowed if done by veterinarian or other person with approved training.	Allowed if done by veterinarian, or other person approved by the veterinarian, if anaesthesia is used.	Allowed if done by veterinarian, or other person approved by the veterinarian, if anaesthesia is used.	Allowed if done by veterinarian	Forbidden	Allowed: to remove superfluous teats for calves under the age of one month.	Allowed if done by veterinarian with anaesthesia	Allowed if done by veterinarian	Forbidden
UK	England / Wales / Scotland: Freeze branding allowed. Hot branding: forbidden. / Northern Ireland: Freeze branding- allowed. Hot branding - allowed if performed by a veterinarian	England / Wales / Scotland / Northern Ireland: Allowed.	England / Wales / Scotland / Northern Ireland: Allowed.	England / Wales / Scotland / Northern Ireland: Allowed.	England / Wales / Scotland / Northern Ireland: Allowed.	England / Wales / Scotland / Northern Ireland: Allowed.	England / Wales / Scotland: Forbidden. / Northern Ireland: Allowed (but must be performed by a veterinary surgeon).	England / Wales / Scotland: removal of supernumerary teats: Allowed. / Northern Ireland: Allowed (but must be performed by a veterinary surgeon).	England / Wales / Scotland / Northern Ireland: Allowed.	England / Wales / Scotland / Northern Ireland: Allowed (but must be performed by a veterinary surgeon).	England / Wales / Scotland: Forbidden. / Northern Ireland: Allowed (but must be performed by a veterinary surgeon).

*No replies to our requests for information were received from CY, CZ, LU, MT, SI and RO. The data presented is our interpretation, and should be treated with caution.

3.3 Non-legislative initiatives

Table 3.2 presents examples of non-legislative initiatives to reduce mutilations in cattle in different European countries. In each case, the measure is related to a quality assurance scheme, except for the German BMEL initiative (discussed in paragraph 3.4.4). Although we did not specifically investigate the issue, it can be assumed that the primary incentive for farmers to comply with the requirements of these schemes are related to the premium they get paid for their products. Other possible incentives include a positive image, and e.g. reduced (veterinary) costs.

Absence of other types of initiatives

Only one initiative was identified which was not related to a quality assurance scheme. It concerns a 'Action Plan' towards more natural births in double muscled beef cattle (Anonymous, 2014), initiated by Belgian and Dutch chain partners. The initiative aims to avoid the routine use of caesarean sections in these breeds. The discussions with various experts, nor the internet search yielded other non-legislative initiatives. It is of course possible that e.g. subsidies or certain farmer or chain initiatives are not published on internet. However, there seems to be limited incentive to control or reduce the prevalence of mutilations in cattle, despite the fact that these procedures are not legislated for at an EU level. No data were found on e.g. educational, NGO or subsidy providing measures to reduce mutilations in cattle.

- ➔ It is possible that compared to other species, a) the painful procedures applied to cattle are considered less relevant from a societal point of view (the cattle industry has a 'green' image), or b) that our society considers they are sufficiently controlled already, or c) that they are deemed essential and should not be obstructed.

Only a few countries involved

We identified and investigated 14 non-organic quality assurance schemes from 6 different countries. In addition, 4 national organic standards were looked at. The 6 countries involved (DE, DK, SE, UK, EI and NL) are all located in North Western part of Europe.

- ➔ Until now, marketing cattle friendly products which include restrictions to painful management procedures seems a North-Western European affair.

Limited number of mutilations addressed

The schemes primarily address castration, dehorning and disbudding. Routine caesareans, tail docking, hot branding, removal of extra (small) teats and ear notching are referred to, but are much less emphasised. We did not find any schemes that include restrictions on nose ringing, vasectomy or chipping.

- ➔ Castration, dehorning and disbudding are performed routinely in the livestock industry. There are only a few assurance schemes which ban dehorning and disbudding, and none that ban castration (except for the highest tier of the Whole Foods label, and Demeter production). This either means that they consider the practices to be unavoidable, or that they consider them to be sufficiently dealt with through the requirement of skilled operators and painkillers, or both.
- ➔ Routine caesareans, tail docking and hot branding are banned by the few schemes which specifically address them. However, they are not referred to by most of the schemes. It is possible that the national legislation already bans them or that they are not commonly practiced by the farmers supplying to the quality assurance scheme.

Painful routine mutilations are generally not banned

For 3 very painful procedures, the schemes aim for a reduction of pain, rather than banning the mutilation itself. For castration, and to a slightly lesser extent also for dehorning and disbudding, the schemes require veterinary involvement and the use of anaesthesia and analgesia. They also place restrictions on the age of the animal and the methodology used to apply the procedure. There seems

to be little consensus among the schemes on specific requirements. In general, anaesthesia and analgesia is preferred over anaesthesia alone, and young animals are perceived to suffer less from a procedure compared to older animals (perhaps because at a younger age the wound is smaller and so e.g. is the risk of inflammation). For castration, rubber rings are considered less desirable compared to the Burdizzo clamp. For disbudding, chemical methods are less preferred compared to the use of a hot iron.

- ➔ Quality assurance schemes generally aim to control and limit the impact which these painful routine procedures have on the animal, rather than banning them.

Table 3.2.

Examples of quality assurance schemes and other initiatives in EU member states which include a reduction of painful management procedures in cattle.

	Initiative	Category	Initiator	Type of mutilation	cf CoE	cf Nation legisl	Position
NL	Beter leven: 1 star and 2 stars	Food label	Dutch animal protection society	**(Routine) caesarean sections**	=	+++	Forbidden.
NL	Towards more natural births	Chain partner initiative	Dutch and Belgian chain partners	**(Routine) caesarean sections**	=	+	Aiming to reduce the incidence.
UK	RSPCA Assured	Food label	UK animal protection society	**(Routine) caesarean sections**	=	=	Forbidden.
DE	Neuland	Food label	3 German NGOs	**Castration**	+	+	Allowed. Until 9 months. Veterinarian. Anaesthesia.
DE	Vier Pfoten: 1 star	Food label	German animal protection society	**Castration**	+	+	Allowed. Anaesthesia and analgesia.
DE	Vier Pfoten: 3 stars	Food label	German animal protection society	**Castration**	+	+	Allowed. Anaesthesia and analgesia.
DK	Velfærdsdelikatesser	Food label	Danish organic label	**Castration**	+	+	Allowed. Until 10 months. Veterinarian. Anaesthesia
IE	Bord Bia - Irish Food Bord	Food label	Irish Product Board	**Castration**	+	+	Allowed. Before month 6 with a clamp and ideally between months 2 and 3, by competent person. After month 6: veterinary supervision, anaesthesia and analgesia. Rubber rings: only in the first week of life.
NL	Beter leven: 1 star and 2 stars	Food label	Dutch animal protection society	**Castration**	+	+	Allowed. Veterinarian. Anaesthesia and analgesia.
NL	Beter leven: 3 star	Food label	Dutch Organic Standards	**Castration**	+	+	Allowed. Veterinarian. Anaesthesia and analgesia.
SE	KRAV	Food label	Swedish Organic Standards	**Castration**	+	+	Allowed. Until 8 weeks. Exceptionally later. Anaesthesia and analgesia.
SE	Svenskt Sigill	Food label	Swedish industry	**Castration**	+	=	Allowed, veterinarian.
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Castration**	+	+	Allowed. Rubber ring up to 1 week. Competent person. Burdizzo up to 2 months. Competent person. Over 2 months of age: veterinarian and aneasthetic
UK	RSPCA Assured	Food label	UK animal protection society	**Castration**	+	+	Allowed. Rubber ring between 1 day and 7 days. By Burdizzo clamp after 1 day and before 2 months.
UK	Soil association	Food label	UK Organic Standards	**Castration**	+	+	Allowed. Advice: up to 2 months. Competent person. Over 2 months: veterinarian. Rubber rings: up to one week.
UK	Whole Foods UK Step 1	Food label	Global not-for-profit Partnership	**Castration**	+	+	Allowed. Up to 6 months.
UK	Whole Foods UK Step 2	Food label	Global not-for-profit Partnership	**Castration**	+	+	Allowed. Up to 3 months.
UK	Whole Foods UK Step 4	Food label	Global not-for-profit Partnership	**Castration**	+	+	Allowed. Up to 3 months.

	Initiative	Category	Initiator	Type of mutilation	cf CoE	cf Nation legisl	Position
UK	Whole Foods UK Step 5 and 5+	Food label	Global not-for-profit Partnership	**Castration**	+	+	Forbidden.
DE	New ways to improve animal welfare	Government + Industry	BMEL supported industry initiative	**Dehorning**	+	+	Aiming to ban dehorning without pain relief
DE	Neuland	Food label	3 German NGOs	**Dehorning**	+	+	Allowed. Veterinarian. Anaesthesia.
DE	Vier Pfoten: 1 star	Food label	German animal protection society	**Dehorning**	=	+	Allowed. Anaesthesia and analgesia.
DE	Vier Pfoten: 3 stars	Food label	German animal protection society	**Dehorning**	+++	+++	Forbidden.
DK	Velfærdsdelikatesser	Food label	Danish organic label	**Dehorning**	+	+	Allowed. Before weaning. Veterinarian. Anaesthetic.
IE	Bord Bia - Irish Food Bord	Food label	Irish Product Board	**Dehorning**	+	+	Allowed. Veterinarian. Anaesthesia and analgesia.
NL	Beter leven: 1 star and 2 stars	Food label	Dutch animal protection society	**Dehorning**	+	+	Allowed. Up to 5 weeks. Veterinarian. Hot iron only. Anaesthesia and analgesia.
NL	Beter leven: 3 star	Food label	Dutch Organic Standards	**Dehorning**	=	=	Allowed. Appropriate age. Anaesthesia.
SE	KRAV	Food label	Swedish Organic Standards	**Dehorning**	+	+	Allowed. Anaesthesia and analgesia.
SE	Svenskt Sigill	Food label	Swedish industry	**Dehorning**	+	=	Allowed, competent person, anaesthesia and pain relief
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Dehorning**	+	+	Allowed. Up to 5 months of age: competent person with anaesthetic. Over 5 months of age: veterinarian with anaesthetic
UK	RSPCA Assured	Food label	UK animal protection society	**Dehorning**	+	+	Allowed. Veterinarian. Not routinely.
UK	Whole Foods UK Step 1-5+	Food label	Global not-for-profit Partnership	**Dehorning**	+++	+++	Forbidden.
DE	Neuland	Food label	3 German NGOs	**Disbudding**	+++	+++	Forbidden.
IE	Bord Bia - Irish Food Bord	Food label	Irish Product Board	**Disbudding**	+	=	Allowed. Before 2 weeks: hot iron. After 2 weeks: local anaesthetic.
SE	KRAV	Food label	Swedish Organic Standards	**Disbudding**	+	+	Allowed. Up to eight weeks. Hot iron.
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Disbudding**	+	+	Allowed. Chemical up to 1st week. Competent stock person. Hot iron up to 2 months. Competent stock person. With anaesthetic
UK	RSPCA Assured	Food label	UK animal protection society	**Disbudding**	+	+	Allowed. Up to 5 weeks. Hot iron. Local anaesthesia
UK	Soil association	Food label	UK Organic Standards	**Disbudding**	+	+	Allowed. Recommendation: under two months. Competent person. Over two months: veterinarian.

	Initiative	Category	Initiator	Type of mutilation	cf CoE	cf Nation legisl	Position
UK	Whole Foods UK Step 1-4	Food label	Global not-for-profit Partnership	**Disbudding**	=	=	Allowed.
UK	Whole Foods UK Step 5 and 5+	Food label	Global not-for-profit Partnership	**Disbudding**	+++	+++	Forbidden.
UK	Whole Foods UK Step 5 and 5+	Food label	Global not-for-profit Partnership	**Ear notching**	+++	+++	Forbidden.
NL	Beter leven: 1 star and 2 stars	Food label	Dutch animal protection society	**Freeze or hot Branding**	+++	+++	Forbidden: both
SE	Svenskt Sigill	Food label	Swedish industry	**Freeze or hot Branding**	++	=	Forbidden: hot branding
UK	Soil association	Food label	UK Organic Standards	**Freeze or hot Branding**	++	=	Forbidden: hot branding
UK	Whole Foods UK Step 5 and 5+	Food label	Global not-for-profit Partnership	**Freeze or hot Branding**	+++	+++	Forbidden: both
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Removing of extra (small) teats**	-	+	Allowed. Up to 3 months: Competent stock person. Anaesthetic. Over 3 months: veterinarian. Anaesthetic.
UK	RSPCA Assured	Food label	UK animal protection society	**Removing of extra (small) teats**	-	+	Allowed. Up to 5 weeks. Anaesthetic.
DE	Vier Pfoten: 1 star	Food label	German animal protection society	**Tail docking**	=	+++	Forbidden.
DE	Vier Pfoten: 3 stars	Food label	German animal protection society	**Tail docking**	=	+++	Forbidden.
NL	Beter leven: 1 star and 2 stars	Food label	Dutch animal protection society	**Tail docking**	=	=	Forbidden.
SE	Svenskt Sigill	Food label	Swedish industry	**Tail docking**	=	=	Forbidden.

3.4 Focus Mutilation: Dehorning and disbudding

3.4.1 Prevalence of the practice

Approximately 23.5 million dairy cows and 12 million beef cattle are kept in the EU-28. The main production of dairy cows is held by Germany with 18.2% of the total EU 28 dairy cow population (4.2 million cows), followed by France with 3.6 million dairy cows. France (19.1%), Germany (16.8%) and the United Kingdom (13.5 %) contributed around 50% of the total EU-28 beef production in 2013 (Eurostat, 2014). The Netherlands current production covers approximately 4.2 million cattle in total, including 1.6 million dairy cows and 2.6 million beef cattle (CBS, 2015).

Dehorning of cattle is a standard practice in many cattle production systems. It facilitates routine handling of the animals, reduces the risk of injuries to other cows during aggressive interactions and competition at the feeding gate, and reduces the risk of injuries to stock people and other humans (Duffield, 2008; NFACC, 2009; AVMA, 2010). According to a large European survey carried out in 2008 by the ALCASDE ('Alternatives to castration and dehorning') project, 81% of the dairy farms, 47% of the beef farms and 68% of the suckler farms keep disbudded or dehorned animals (Cozzi et al., 2015).

Two different methods are applied. The prevention of horn-growth, called 'disbudding' is carried out when the horn is still absent or smaller than 2 cm. Usually either thermocautery or chemical cauterization is applied. 'Dehorning' (the removal of the horn) takes place in older animals, approximately from 2 months onwards. This is achieved by means of instruments such as a scoop, embryotomy wire, shears, saws, and others (EFSA, 2012).

Dehorning is considered more painful than disbudding (Stafford and Mellor, 2011). The pain inflicted can be reduced by local anaesthetics (e.g. lidocaine), non-steroidal-anti-inflammatory drugs (NSAID) and sedatives, such as xylazine. It should be noted that sedation may simply mask the signs of pain, and not provide pain relief.

3.4.2 Mitigating the negative welfare consequences

EFSA (2012) has ranked the different methods of dehorning and disbudding according to the level of discomfort to the animal. They regard the procedure by which the horn is amputated and the wound cauterised as the most painful method (6 out of 6). Without wound cauterisation this score is 5/6, and this score is further reduced if a prior local anaesthetic is applied (4/6). Hot iron or caustic paste disbudding ranks at 3/6. This is equal to prior NSAID and amputation dehorning. Applying a prior local anaesthetic in combination with cautery disbudding is ranked at 2/6, which is equal to prior local anaesthetic plus NSAID and amputation. A pain score of 1/6 is awarded to "Prior local anaesthetic + amputation dehorning + wound cautery" and "Prior local anaesthetic + thermal or chemical cautery disbudding + NSAID".

Estimations of how often pain killers are used vary widely. The ALCASDE (2009) survey estimates showed that anaesthetic or analgesic treatment is administered to the animals prior to or after disbudding in 35 % of beef cattle, and 52% when dehorning older animals. In 2011 Gottardo et al (2011) presented an analysis of 639 replies to a questionnaire sent to farmers in the traditional dairy area of North Eastern Italy. Only 10% of the farmers used local anaesthesia before cauterization, and 5% of the farmers provided calves with postoperative analgesia. Whay and Huxley, (2005) are even less optimistic: they estimate it to be only 1 % of dehorning cases. One year later the same authors published new data and reported that 1.7 % of the 605 respondents said they used an NSAID after disbudding. Significant was the number of practitioners that used the xylazine (17%), lidocaine (74 %) or no drug (25 %) for these procedures (Huxley and Whay, 2006). A US survey reported the use by dairy farmers of anaesthesia and analgesia for dehorning to be 12.4% and 1.8% respectively

(Fulwider et al., 2008). In the vast majority of cases disbudding is carried out by the farmer himself, and the same to a slightly lesser extent applies to dehorning.
It is important to note that as an alternative to these mutilations, it is possible to genetically select for polled cattle, which do not have horns at all. Even though the genes for polling are dominant, this approach is not widely applied. EFSA (2012) recommends that "Research to develop an accurate breed-specific DNA test for the poll gene is needed. Breed societies should engage with the cattle industry to overcome certain misconceptions about breeding polled cattle". Finally, the need to dehorn or disbud can also be reduced through housing and management measures (Baars and Brands, 2000).

3.4.3 Legislative initiatives to reduce dehorning

As reported in the paragraphs above, there is no EU legislation that bans dehorning. The Council of Europe recommendations (1988) state in article 17 that dehorning and disbudding are to be allowed, and that local or general anaesthesia should be used when dehorning cattle or when disbudding after the age of 4 weeks. Disbudding under 4 weeks of age can be done without anaesthesia, but only by chemical or heat cauterisation. The exact text of the recommendations can be found in Annex 1.

All European member states have adopted these recommendations, with some exceptions as to the age at which disbudding can still take place. The recommendations have been in place since 1988. No MS has banned either disbudding or dehorning.

Disbudding under 4 weeks of age without anaesthesia is probably based on the assumption that younger animals feel less pain. Nowadays we know that is not correct and in practise you see that disbudding is always done with anaesthesia and more often also with analgesia. This not only for pain reduction but also because it prevents the dip in the development of the young calf that follows after disbudding without pain relief.

3.4.4 Non-legislative initiatives to reduce dehorning

Only examples of non-legislative initiatives were identified that aim to reduce dehorning through quality assurance schemes, with one exception: the German ministry (Bundesministerium für Ernährung und Landwirtschaft -BMEL) actively supports voluntary agreements currently set up with German industry partners to ban dehorning of cattle without pain relief. BMEL brings together science, industry and animal welfare groups and moderates the process. The timeline will be based on advances in science and practice that BMEL supports through pilot and demonstration projects (BMEL, 2014).
We found 11 quality assurance schemes which mention dehorning and 8 which refer to disbudding. The only countries involved are DE, DK, SE, UK, IE and NL. A complete ban of the practices is seldom applied: the schemes generally require specific aspects to be considered: e.g. the method used, the age of the animals, requirements regarding the operator and the level of anaesthesia. It appears that quality assurance schemes agree the practice is unavoidable.

3.4.5 Strengths and weaknesses of initiatives to reduce dehorning of cattle

Table 3.3 is based on the examples found and telephone discussions with the representatives of non-legislative initiatives aiming to reduce dehorning and disbudding. It summarises the status, strengths and weaknesses of the main routes identified to reduce the mutilation, and proposes a conclusion regarding each of them.

Table 3.3.

Comparative analysis of different initiatives to reduce dehorning of cattle in Europe

Reduce dehorning through	Status	Weaknesses of this type of initiative	Strengths of this type of initiative	Conclusion
EU Legislation	No legislation (i.e. no ban)	Difficult to reach consensus between all MS, farmer becomes 'problem owner' without solutions	Clarity and uniformity, level playing field across Europe	Low feasibility to ban dehorning
CoE recommendations	Recommendations since 1988 (no ban)	Consensus result of negotiations (thus conservative)	Applicable across Europe	Low feasibility to ban dehorning
National legislation	Present (but no MS has banned dehorning)	'Uneven playing field', farmer becomes 'problem owner' without solutions	Tailored to local needs and opportunities	Success limited to some MS
Quality assurance	Present in small number of MS (dehorning rarely banned)	No sense of urgency on dehorning, present in limited number of MSs, dependant on 'willingness to pay'	Tailored solutions, financial incentive for farmers	Success limited to relatively small part of Europe
Breeding for polled animals	Research is underway (will take many years)	Dependent on close collaboration between science, farmers and breeders	No apparent draw backs	Feasible long term solution to end dehorning, and end the risk of injuring humans or herd mates

4 Mutilations related to sheep and goats

4.1 European legislation

There is no EU legislation in the European Union regarding mutilations of sheep and goats. However, the Council of Europe has issued guidelines which the EU member states can adopt in their national legislation. These Council of Europe recommendations concerning sheep and Council of Europe recommendation concerning goats were both adopted on 6 November 1992 by the Standing Committee of the European Convention for the Protection of Animals kept for Farming Purposes, and are regarded as part of EU's acquis. They address several painful management procedures.

Sheep

In the sheep recommendations paragraph 1 of Article 30 focusses on procedures which result "in the loss of a significant amount of tissue or the modification of bone structure, or which cause a significant amount of pain or distress". It is recommended to forbid them, and in particular:
- amputation of the penis or other penile operations
- disbudding of the horns
- freeze dagging
- mulesing
- tooth grinding and tooth shearing

However, paragraph 2 allows exceptions for procedures performed solely for veterinary purposes to relieve or to prevent pain or suffering. It also suggests that a number of procedures can be applied if certain conditions are met. They are the docking of tails (by surgical methods or with haemostatic tongs, so long as sufficient tail is retained to cover the anus in male, and the vulva in female sheep), castration (by surgical methods or with haemostatic tongs), dehorning, vasectomy, ear marking (by tagging or tattooing), the identification by implantation of an electronic device or horn branding, and (where allowed under national legislation) castration and tail-docking by the use of rubber rings, notching and punching of the ears.

Finally, in paragraph 3 it is stated that "tail-docking and castration, in particular by the use of rubber rings, should be avoided. If these procedures have to be carried out, only surgical methods preceded by anaesthesia or haemostatic tongs should be used. Dehorning should only be carried out by a veterinarian using an anaesthetic. Vasectomy and caesarean section or any other laparotomy shall only be carried out by a veterinarian. Other procedures in which the animal will, or can reasonably be expected to, experience pain may only be carried out with the use of an anaesthetic and shall be carried out only by a veterinarian or other person qualified in accordance with national legislation". Article 31 states that "breeding or breeding programmes which cause or are likely to cause suffering or harm to any of the animals involved shall not be practised". This would include routine caesareans on sheep with heavy lambs.

Goats

Article 28, paragraph 1 of the goat recommendations specifies that "Procedures resulting in the loss of a significant amount of tissue or the modification of bone structure, or which cause a significant amount of pain or distress shall be forbidden".

There are exceptions specified in paragraph 2: when pain or suffering has to be prevented, for identification purposes (tagging, tattooing, freeze branding or electronic identification), and for procedures allowed by national legislation (notching and punching of ears, disbudding, dehorning and castration).

Paragraph 3 requires a veterinarian to perform dehorning, caesareans, disbudding and castrations, with the use of an anaesthetic. All procedures in paragraph 2 aimed at preventing pain or suffering shall be carried out only by a veterinarian or, if allowed under national legislation, under veterinary supervision.

For goats a breeding programme likely to cause suffering is also banned (Article 29), just like for sheep.

4.2 Legislation per EU member state

Table 4.1 provides an overview of the main painful management procedures related to sheep and goats.

Chipping and ear notching are not considered very invasive

For sheep as well as goats chipping is allowed by the CoE recommendations, and ear notching if national legislation accepts it.
All MSs allow chipping. Some countries have banned notching: AT, DE, SE and NL.

- ➔ It appears that from a legislative point of view these mutilations do not warrant additional rules.

Castration, vasectomies, tail docking and dehorning are allowed as 'necessary evils'

The CoE recommends that castration and tail docking can be performed, but only by a qualified person (tail docking is of course not practiced in goats). In general, the MSs have implemented this. SE requires all castrations to be done by a veterinarian. DK and FI require this only when older lambs are castrated.
Tail docking is banned in only three countries: LI, FI, SE. DK requires older lambs to be anaesthetised when tail docked, and all docking to be done by a veterinarian (the latter is also required in LT). In the Netherlands tail docking is forbidden with a temporary exemption for three breeds of sheep. The Dutch industry is asked to concentrate on breeding sheep less wool around the tail.

Dehorning and vasectomy should be done by a veterinarian only according to the CoE. BE appears to be the only member state which bans vasectomies in sheep and goats. Dehorning is banned in BE, AT and DE. It is only allowed to be performed by a veterinarian in DK, FI, SE, LT and the UK.

- ➔ There is general agreement among the legislators of the different member states that farmers should be allowed to perform these painful procedures: there are only a few bans. If there are restrictions, they focus on the operator: in a small number of MSs the CoE recommendations are followed and the operator should be a veterinarian.

Mulesing, disbudding, removal of super numerous small teats and routine caesarean section are not accepted in the EU

These four procedures are banned for both species according to the CoE recommendations (with the exception of disbudding which is allowed in goats). Mulesing and disbudding are mentioned explicitly. The removing of super numerous small teats is not mentioned as an exception to the ban on the removal of a significant amount of tissue, and therefore must be assumed to be banned too. Art 31 infers that routine caesareans are also forbidden.
Mulesing is allowed in SK and in Northern Ireland (in the latter only when performed by a veterinarian), and the removal of extra teats is allowed only under certain conditions in HR, NL, UK (Northern Ireland only).

Disbudding of sheep and goats is allowed in several MSs: HR, IE, LI, FR, DK, BE, AT, HU, SK and UK. There are two countries which only allow it for goats (not for sheep): SE, NL.
Caesareans are allowed in all MSs, and only two countries specify they should not be carried out routinely: SE and AT.

- ➔ Although all four procedures are recommended against by the CoE, their transposition to national legislation differs considerably. There is general agreement that mulesing and the removal of extra teats should not be applied, but there are considerable differences among member states regarding disbudding.
- ➔ It is unclear why dehorning is recommended against by the CoE for sheep and goats, but not for cattle. It can be speculated that this is due to the perception that horned cattle provide a greater risk to humans, than horned sheep and goats.
- ➔ As routine caesareans are hardly practiced in sheep and goats, it is likely that MSs have not specifically addressed it in their legislation.

Table 4.1.

A comparison of the legislation on painful management procedures in sheep and goat husbandry of 28 EU member states and the recommendations of the Council of Europe (1992).*

Green:	MS appears more strict than CoE
Grey:	MS appears comparable to CoE
White:	MS appears less strict than CoE

Procedure	**Ear notching**	**Chipping**	**Dehorning**	**Disbudding**	**Mulesing**	**Tail docking**	**Removing of super numerous small teats**	**Castration**	**Vasectomy**	**Caesarean section**
	Allowed	Allowed	Allowed	*Depends*	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
EU or Council of Europe rule or position	Article 30 2 c (sheep) and Article 28 (goats)	Article 14 3 (sheep) and Article 14 2 (goats)	Article 30 2 and 3 (sheep), and Article 28 (goats)	Forbidden in Article 30 1 (for sheep), but Allowed according to Article 28 (for goats).	Article 30 1 (sheep) and Article 28 (goats)	Article 30 3 (sheep) and Article 28 (goats)	It is not an exemption in Article 30 for sheep and Article 28 for goats.	Article 30 2 and 3 (sheep), and Article 28 (goats).	Article 30 3 (sheep) and Article 28 3 (goats)	Article 30 3 (sheep) and Article 28 3 (goats)
Austria	Forbidden. Tagging is possible.	Allowed	Forbidden. (only permitted for therapeutic purpose).	Allowed	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed are surgical delivery, but not routine caesareans
Belgium	Allowed	Allowed	Forbidden	Allowed, only by means of thermal cauterisation	Forbidden	Allowed only for female sheep, only by surgical means, vulva must stay covered	Allowed by surgical method or by use of haemostatic pliers	Allowed	Forbidden	Allowed
Bulgaria	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed

Procedure	Ear notching	Chipping	Dehorning	Disbudding	Mulesing	Tail docking	Removing of super numerous small teats	Castration	Vasectomy	Caesarean section
Croatia	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Forbidden, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 1.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 2. Item 1. And 3., paragraph 3.
Cyprus	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Czech Republic	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Denmark	Allowed	Allowed	Allowed, but only by a veterinarian, and with anaesthesia. The use of caustic paste, rubber bands, elastrator or the like is prohibited.	Allowed, but only when carried out by a veterinarian, and when the animal is given an anaesthetic. Using caustic paste is prohibited.	Forbidden. Regarded as a violation of the general principles in the Act on the protection of animals	Allowed, but only by a veterinarian and with anaesthesia. As an exception lambs may within the 2nd and 7th day of life be tail docked using elastrator	Forbidden, when the purpose is to modify the appearance of an animal	Allowed, by veterinarian and with anaesthetic. Exception: lambs and goat kids less than 5 weeks of age, by the farmer using Burdizzo and elastrator, if veterinarian gave a local anaesthetic	Allowed	Allowed
Estonia	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Finland	Allowed	Allowed	Allowed when performed by veterinarian	Forbidden	Forbidden	Forbidden	Forbidden	Allowed by competent person within 6 weeks. Goats and older sheep only by veterinarian.	Allowed	Allowed

Procedure	Ear notching	Chipping	Dehorning	Disbudding	Mulesing	Tail docking	Removing of super numerous small teats	Castration	Vasectomy	Caesarean section
France	Allowed	Allowed	Allowed	Allowed	Forbidden	Allowed	Allowed, by surgical method or haemostatic pliers	Allowed	Allowed, only by a veterinarian	Allowed, only by a veterinarian
Germany	Forbidden (allowed: ear tagging)	Allowed	Forbidden	Forbidden	Forbidden	Allowed, under 8 days of age	Forbidden	Allowed under 4 weeks of age	Allowed, under 4 weeks of age	Allowed, by veterinarian, but not routinely
Greece	Allowed. Regulation 1760/2000 makes ear tagging compulsory according to rules provided.	Allowed. Regulation 21/2004 for identification and registration allows electronic transponders	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Hungary	Allowed, taking into account Act XXVIII of 1998 on the Animals Welfare, paragraph (3) of 10. § Not practiced in Hungary.	Allowed, but: Act XXVIII of 1998 on the Animals Welfare, paragraph (3) of 10. Not in practice in Hungary.	Allowed, however it is not practiced in Hungary.	Allowed, however it is not practiced in Hungary.	Forbidden, according to Act XXVIII of 1998 on the Animals Welfare, paragraph (1) of 6. §	Allowed, according to Annex 6 to Decree 32/1999 (III. 31.).	Forbidden. Removing of the so called 'extra teats', is allowed for health reasons according to Annex 6 of Decree 32/1999 (III. 31.)	Allowed, according to Act XXVIII of 1998 on the Animals Welfare, paragraph (2) of 10. §	Allowed, according to Act XXVIII of 1998 on the Animals Welfare, paragraph (2) of 10. §	Allowed
Ireland	Allowed	Allowed	Allowed	Allowed	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Italy	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Latvia	Allowed	Allowed	Allowed if done by veterinarian	Forbidden	Forbidden	Allowed if done by veterinarian	Forbidden	Allowed	Allowed	Allowed
Lithuania	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Forbidden	Allowed	Allowed	Allowed
Luxembourg	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Malta	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed

Procedure	Ear notching	Chipping	Dehorning	Disbudding	Mulesing	Tail docking	Removing of super numerous small teats	Castration	Vasectomy	Caesarean section
Netherlands	Forbidden	Allowed	Allowed, according to Artikel 2.77a of "besluit houders van dieren"	Forbidden for sheep, allowed for goats.	Forbidden	Allowed, only for ewes of 3 breeds of sheep, under certain conditions	Allowed.	Allowed	Allowed, but only by a veterinarian	Allowed, but only by a veterinarian
Poland	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Portugal	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Romania	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Slovakia	Allowed	Allowed	Allowed, in accordance with the National Legislation (Art 22 2 b of the Act No 39/2007 Coll. on Veterinary Care As Amended)	Allowed, in accordance with the National Legislation (Art 22 2 b of the Act No 39/2007 Coll. on Veterinary Care As Amended)	Allowed	Allowed, in accordance with the National Legislation (Art 22 2 b of the Act No 39/2007 Coll. on Veterinary Care As Amended)	Forbidden	Allowed, in accordance with the National Legislation (Art 22 2 b of the Act No 39/2007 Coll. on Veterinary Care As Amended)	Allowed, in accordance with the National Legislation (Art 22 2 b of the Act No 39/2007 Coll. on Veterinary Care As Amended)	Allowed
Slovenia	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Spain	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Forbidden	Allowed	Allowed	Allowed
Sweden	Forbidden. Only ear tags are allowed.	Allowed. Microchip is allowed if done by person with approved training.	Allowed if done by veterinarian	Forbidden for sheep, allowed for goats by veterinarian and with anaesthesia.	Forbidden	Forbidden	Forbidden	Allowed if done by veterinarian	Allowed if done by veterinarian	Allowed if done by veterinarian but routine caesareans are not allowed.
UK	Allowed.	Allowed.	Allowed (but must be performed by a veterinary surgeon).	Allowed	Forbidden, but allowed in Northern Ireland (but must be done by a veterinarian)	Allowed for sheep. Forbidden in England / Wales / Scotland for Goats	Forbidden, but allowed in Northern Ireland (but must be done by a veterinarian)	Allowed	Allowed (but must be performed by a veterinary surgeon).	Allowed, Covered by Veterinary Surgeons Act 1966 (must be done by a veterinarian)

*No replies to our requests for information were received from CY, CZ, LU, MT, SI and RO. The data presented is our interpretation, and should be treated with caution.

4.3 Non-legislative initiatives

Table 4.2 presents examples of non-legislative initiatives to reduce the prevalence of mutilations in sheep and goats. Nine initiatives related to sheep and goats were found. They are all related to quality assurance schemes.

North West Europe

All initiatives found originate from five countries in North-Western Europe: IE, UK, DK, DE and SE. Other EU member states with a large sheep and goat industry (ES, GR, FR) are absent.

- ➔ When it comes to market initiatives, there seems little incentive outside NW Europe to promote animal welfare of sheep and goats.

Not all mutilations are addressed

Ear notching, chipping, removal of excess teats, vasectomies and caesarean sections are not specifically mentioned in the initiatives. Possible explanations are that these procedures are either considered not to be very distressing (notching, chipping), or are not practiced (removal of super numerous small teats, vasectomies and caesareans). It is also possible that the assurance schemes regard it as 'accepted' that these procedures are not applied at all, e.g. because there are sufficient alternatives available (as is the case with ear notching). Another possibility is that there is very little societal pressure on the improvement of the welfare of sheep and goats: they appear to enjoy a relatively 'green' image.

- ➔ It appears these mutilations are not a high priority for quality assurance schemes, and therefore do not feature in the rules for participation.

Banning is not easy

The majority of initiatives aim at reducing pain, rather than a ban of the procedure. There are only a few exceptions, mainly from schemes which aim to produce according to organic standards or beyond, and which are relatively small.

- ➔ The lack of a ban suggests that the majority of quality assurance schemes consider painful procedures such as castration and dehorning to be unavoidable in commercial sheep and goat farming.

Market initiatives rarely go beyond national legislation

With the exception of two small quality assurance schemes in DK and DE there are no initiatives that ban a particular mutilation, if it is allowed by their own national legislation. The two schemes consider it possible to ban castration and tail docking, whereas the additional requirements applied by the main quality assurance schemes refer to the ways in which the procedure is carried out.

- ➔ The main market initiatives appear not to see sufficient advantage in a ban of the main sheep and goat mutilations, if they are not already banned by their national legislation.

Table 4.2.

Examples of quality assurance schemes and other initiatives in EU member states which include a reduction of painful management procedures in sheep and goats.

	Initiative	Category	Initiator	Type of mutilation	cf CoE	cf National	Position
SE	Svenskt Sigill	Food label	Swedish industry	**Castration**	+	=	Allowed, veterinarian.
DE	Neuland	Food label	3 German NGOs	**Castration**	+	+	Allowed. Aneasthesia needed, type (local or full) to be decided by veterinarian.
DK	Velfærdsdelikatesser	Food label	Danish Animal Protection Association	**Castration**	+++	+++	Forbidden.
IE	Bord Bia - Irish Food Bord	Food label	Irish Product Board	**Castration**	+	+	Allowed. Rubber rings only first week of life. When using a clamp (e.g. Burdizzo) only up to 3 months of age.
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Castration**	+	+	Allowed. Competent person: elastration/ Rubber ring 1st week of life only, clamp/ bloodless up to 3 months. Over 3 months of age or other method: veterinary only, with anaesthetic.
UK	RSPCA Assured	Food label	UK animal protection society	**Castration**	+	+	Allowed, only by permission of RSPCA, by trained competent person, including pain relief discussed with veterinarian, a) rubber ring between 1 day and 7 days, b) bloodless castrator between 1 day and 8 weeks, c) surgically by veterinarian using pre or post operational pain relief.
UK	Soil association	Food label	UK Organic Standards	**Castration**	+	+	Allowed. a) rubber rings, only up to seven days of age. B) burdizzo method up to six weeks old and with anaesthetic.
DE	Neuland	Food label	3 German NGOs	**Dehorning**	+++	=	Forbidden.
SE	KRAV	Food label	Swedish Organic Standards	**Dehorning**	+	=	Allowed, by exception and with anaesthesia and pain relief.
SE	Svenskt Sigill	Food label	Swedish industry	**Dehorning**	+	=	Allowed, competent person, anaesthetic and pain relief
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Dehorning**	+	=	Allowed. Any age but veterinary only and with anaesthetic
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Disbudding**	+	=	Allowed. Veterinary only and with anaesthetic
DE	Neuland	Food label	3 German NGOs	**Muelsing**	=	=	Forbidden.

	Initiative	Category	Initiator	Type of mutilation	cf CoE	cf National	Position
SE	KRAV	Food label	Swedish Organic Standards	**Mulesing**	=	=	Forbidden.
DE	Neuland	Food label	3 German NGOs	**Tail docking**	+	+	Allowed by exception. Regarding pain relief the veterinarian should decide.
DK	Velfærdsdelikatesser	Food label	Danish Organic label	**Tail docking**	+	=	Allowed, only by exception: when there is flystrike in the herd.
IE	Bord Bia - Irish Food Bord	Food label	Irish Product Board	**Tail docking**	+	+	Allowed. a) using rubber rings only and in the first week of life, b) sufficient tail must be left to cover the vulva in the female.
SE	Svenskt Sigill	Food label	Swedish industry	**Tail docking**	=	=	Forbidden.
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Tail docking**	+	+	Allowed. Competent person: a) rubber ring 1st week of life, b) hot iron/ clamp, up to 2 months. Any other age: by a veterinarian using anaesthetic
UK	RSPCA Assured	Food label	UK animal protection society	**Tail docking**	+	+	Allowed, only with RSPCA permission, by competent person, using pain relief during operation, leave sufficient length to cover vulva or anus, by a) rubber ring 1-7 days of age, b) thermocautary on vet advice between 1 day and 8 weeks.
UK	Soil association	Food label	UK Organic Standards	**Tail docking**	+	+	Allowed. By a) rubber rings, up to seven days of age, b) a hot iron between 3 - 6 weeks old and with anaesthetic

4.4 Focus mutilation: tail docking of sheep

4.4.1 Prevalence of the practice

The number of live sheep in the EU-28 was approximately 84 million animals in 2014 (Eurostat, 2015). Main producers are UK (23 million) and Spain (15 million) contributing almost 50% of the total production in the EU, followed by Romania, Ireland, Germany and Italy.

Tail docking is a common procedures for the prevention of flystrike (or 'myiasis') in modern sheep husbandry (Sutherland and Tucker, 2011). Myiasis is a disease that is caused by the larvae of a number of fly species. In European sheep, the main cause is the green blowfly (*Lucilia sericata*) (Morris, 2000; Basset, 2009). The fly lays its eggs on warm and humid places, such as in the wool of sheep. Especially the odour of urine and dung around the tail region has been identified to increase the attraction for blowflies (Watts and Marchant, 1977). Within hours to days maggots hatch from the eggs, and start lacerating the skin with their mouthparts, causing open sores with the use of ammonia secretion (Guerrini, 1988; Morris, 2000). The larvae tunnel through the sores into the host's subcutaneous tissue causing deep and irritating lesions highly subject to infection. The rotting flesh attracts new flies. Following a blowfly infestation, sheep were observed to develop several symptoms like hypothermia, dyspnea, oliguria and bacterial infections that ultimately lead to death within 6-8 days (Guerrini, 1988; Basset 2009).

Wall (2012) addresses the prevalence of myiasis in sheep as initiated predominantly by *L. sericata*. In Great Britain myiasis was shown to affect 75% of farms (Bisdorff et al., 2006), with an economic cost estimated to be about 3 million pound Sterling annually. Liebisch et al. (1983) report sheep mortality rates of up to 10% caused by myiasis in the summer of 1981 in North and West Germany. Hungarian figures estimate a prevalence of 17.6% (Farkas, et al., 1997). In the Netherlands, a study of 164 farms found that over half the farms reported at least one case of myiasis with an estimated 2.9% of the sheep affected (Snoep et al., 2002).

Tail docking involves the removal of the tail or part of the tail, to make it easier to keep the area around vulva and anus clean, thus reducing the chance of fly strike. Methods to surgically remove the lower part of the tail include the use of knifes or scalpels, emasculators and docking irons. Also used are constrictive rubber rings, which stop the blood supply thus leading to tissue necrosis and ultimately the slough off the tail (Sutherland and Tucker, 2011). All of these methods are known to cause distress and pain, with the knife generally considered to be the least desirable method (Pollard et al., 2001).

The prevalence of tail docking is related to the perceived risk of fly strike. No recent figures were found, but the procedure is considered 'fairly common' by Sutherland and Tucker (2011). For example, French et al. (1994) estimate 90% of UK farmers to dock tails. The method of docking varies. In the UK, the rubber ring was the most popular method (86%), followed by surgical (3%) and other methods (2%, French et al., 1992).

4.4.2 Mitigating the negative welfare consequences

FAWC (2008) reviews the literature on tail docking and concludes that "it is our view that tail docking is often performed out of tradition rather than necessity and, at best, may only be partially effective in reducing flystrike. Furthermore, it is a difficult ethical judgement as to whether to perform a painful procedure on large numbers of animals for the potential benefit of a small minority. Greater effort should be directed towards prevention of flystrike by methods other than tail docking".

There are many management techniques that can help to minimize the risk of flystrike without the need for tail docking. Phillips (2009) reviews the available alternatives. The removal of soiled wool

through regular dagging or clipping around the breeches and tail is probably the most widely used technique. It leaves shorter wool that is less likely to build up dung and urine – and attract flies. Fenton et al. (1994) suggests that it is the amount of soiling around the tail and breech area of the sheep and length of wool that causes the problem, not necessarily length of tail. Phillips (2009) suggests that good grazing management and treatment of diseases that predispose sheep to diarrhoea will also help to reduce soiling.

There are also alternative methods of removing wool and wrinkles from the hindquarters of sheep. These include ammonium compounds, phenols and caustic soda, but have yet to be proven to be effective, without severely impacting on the welfare of the animal and operator safety (Phillips, 2009). To reduce the number of flies, the strategic use of insecticides, through monitoring and awareness of the weather conditions will also help farmers to effectively address the problem (Phillips, 2009). Other methods include fly trapping (Broughan and Wall, 2006).

Progress can also be made through vaccination. Elkington and Mahony (2007) suggest a new technique to develop a vaccine against blowfly strike. They conclude that a good understanding of host-pathogen interaction will be needed to take this technique further.

Finally, Pollard et al. (2001) refer to Scobie et al. (1999) and suggest that a medium to long-term strategy to stop tail docking would be to cross-breed with short-tailed sheep breeds and/or select for short tails. Scobie and O'Connell (2002) found that tail length is highly heritable and the tail length of a lamb is an average of the length of the parents. According to James (2006) breeding programmes that aim to replace surgical techniques of flystrike prevention could potentially: reduce breech wrinkle; increase the area of bare skin in the perineal area; reduce tail length and wool cover on and near the tail; increase shedding of breech wool; reduce susceptibility to internal parasites and diarrhoea; and increase immunological resistance to flystrike.
Phillips (2009) concluded that in "the long term, the breeding of sheep without wrinkles or wool on their hindquarters offers the most likely method of control".

The current practice of removing tails without anaesthesia or analgesia causes significant pain and distress to the lambs (Kent et al., 1993). Research has shown that the use of local anaesthetic can decrease cortisol responses during tail-docking (Kent et al., 1998), and is recommended to mitigate the negative welfare impact of docking.

4.4.3 Legislative initiatives to reduce tail docking in sheep

As described in the previous paragraphs, there is no EU legislation that deals specifically with tail docking in sheep. However, there are recommendations from the Council of Europe (1992) which states in Article 30 that mutilations are not allowed, with the exception of tail docking (as long as sufficient length of tail is left to cover anus and vulva). Rubber rings should be avoided, and surgical methods with anaesthesia should be used. Research into the problems associated with docking should be encouraged. See Annex 1 for exact text of Article 30.

The CoE recommendations are copied into national legislation by most MSs. There are only three countries that ban docking: Lithuania, Finland and Sweden. Denmark requires older lambs to be anaesthetised when tail docked. Denmark and Lithuania require all docking to be done by a veterinarian. The Netherlands has banned docking for all but 3 breeds of sheep. For these 3 breeds a breeding program is initiated to reduce tail length and the amount of wool on the tail.

It can be concluded that because the CoE recommendations are over 20 years old and have not had a Europe wide impact on abolition of docking, the legal route to reduce this painful procedure is not likely to yield results in the short term.

4.4.4 Non-legislative initiatives to reduce tail docking in sheep

Only 2 examples out of the 8 welfare quality assurance schemes which address tail docking in sheep, forbid the practice. All the others, including e.g. the organic standards from the Soil Association, allow docking (albeit not routinely, and sometimes only after seeking permission). The procedures to be used reflect the recommendations of the Council of Europe and include requirements related to the length of the tail (sufficient length to cover the anus and vulva), the use of rubber rings at very young age only, or the involvement of a veterinarian when applying anaesthetics.

The lack of bans in quality assurance schemes is remarkable, given the wealth of management solutions that can be applied to mitigate the problem of flystrike through other means than docking.

4.4.5 Strengths and weaknesses of initiatives to reduce tail docking in sheep

Table 4.3 is based on the examples found and telephone discussions with the representatives of non-legislative initiatives aiming to reduce tail docking. It summarises the status, strengths and weaknesses of the main routes identified to reduce the mutilation, and proposes a conclusion regarding each of them.

Table 4.3.

Comparative analysis of different initiatives to reduce tail docking of sheep in Europe

Reduce docking through	Status	Weaknesses of this type of initiative	Strengths of this type of initiative	Conclusion
EU Legislation	No legislation (i.e. no ban)	Difficult to reach consensus between all MS, farmer becomes 'problem owner' without solutions	Clarity and uniformity, level playing field across Europe	Low feasibility to ban docking
CoE recommendations	Recommendations since 1992 (no ban)	Exceptions: consensus result of negotiations (thus conservative)	Applicable across Europe	Low feasibility to ban docking
National legislation	Present (but only 3 MS have banned docking)	'Uneven playing field', farmer becomes 'problem owner' without solutions	Tailored to local needs and opportunities	Success limited to some MS
Quality assurance	Present in small number of MS (docking rarely banned)	No sense of urgency on docking, schemes present in a limited number of MSs, dependant on 'willingness to pay'	Tailored solutions, financial incentive for farmers, best practices can facilitate compliance	Success limited to relatively small part of Europe,
Breeding for animals less likely to be fly struck	Research is underway (will take many years)	Dependent on close collaboration between science, farmers and breeders	No apparent draw backs: sustainable alternative	Possible long term solution

5 Mutilations related to horses

5.1 European legislation

There is no European Union legislation addressing painful procedures for horses, except for Regulation (EU) 2015/262 of 17 February 2015, which provides the rules to comply with methods for the identification of equidae (Equine Passport Regulation - Directives 90/427/EEC and 2009/156/EC). The regulation allows freeze and hot branding, and states in the pre-amble at point 24: "Equidae living in the Union should be identified by a lifetime identification document that (...) records the individual marks of that animal (...). These marks may be either inherited (...), or they may be acquired, such as (...) a brand." It also allows chipping in Article 18.1: "the issuing body shall ensure that at the time it is first identified in accordance with Article 12, a transponder is implanted in the equine animal".

Tail docking nor castration of horses is referred to specifically by the EU legislator.

5.2 Legislation per EU member state

Table 5.1 provides an overview of the national legislation on four painful management procedures in horses: branding, chipping, tail docking and castration.

Chipping and castration allowed

European legislation aims for clear identification of individual horses. In contrast with other species, ear tags and notches are not deemed suitable (for aesthetic reasons?), and chipping of horses is a widely accepted alternative.
Castration is also allowed by all MSs, albeit that at least 6 of them stipulate that the procedure is only allowed to be carried out by a veterinarian. It is possible that this requirement also applies in other countries, which did not explicitly state it in their comments.

➔ There is no reason to assume that the rules on chipping and castration of horses will be tightened in the EU member states.

Freeze and hot branding are not regarded as equally painful

EFSA (2007b) considers hot branding to be more painful than freeze branding, and this is also reflected in the relative number of countries banning these practices. Almost all EU member states allow both hot branding as well as freeze branding. There are 6 countries which ban hot branding of horses: BE, DK, FI, IE, NL and SE. These countries allow freeze branding. There is one country that has legislated the reverse: Germany allows hot branding, but has banned freeze branding.

➔ There are arguments for and against the banning of these two methods of identification. MSs do not agree, and have no common approach.

Countries differ on tail docking

Tail docking of horses is banned in 12 of the 28 member states. In contrast to most other painful practices this issue seems to divide the European Union almost in two: Northern countries (including the Baltic states) plus Hungary and Romania have banned it. Some countries (Italy and France) allow the practice, but have added additional requirements (see also: Lefebvre et al, 2007).

➔ Tail docking appears to be the most controversial mutilation of horses, judging by the disagreement among European legislators. The arguments in favour and against it should be discussed, and opportunities to ban the practice across Europe explored.

Table 5.1.

A comparison of the legislation on painful management procedures in horses of 28 EU member states and EU regulation 2015/262.*

Green:	MS bans a practice
Grey:	MS allows a practice

Procedure	Freeze or hot Branding	Castration	Tail docking	Chipping
Position	Allowed	Allowed	Allowed	Allowed
Article	"Whereas (24): Equidae living in the Union should be identified by a lifetime identification document that (...) records the individual marks of that animal (...). These marks may be either inherited (...), or they may be acquired, such as (...) a brand."	It is not covered by EU or Council of Europe legislation.	It is not covered by EU or Council of Europe legislation.	Article 18, 1: the issuing body shall ensure that at the time it is first identified in accordance with Article 12, a transponder is implanted in the equine animal.
Austria	Allowed	Allowed	Allowed	Allowed
Belgium	Hot branding is forbidden, freeze branding is allowed	Allowed	Forbidden	Allowed
Bulgaria	Allowed	Allowed	Forbidden	Allowed
Croatia	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3.
Cyprus	Allowed	Allowed	Allowed	Allowed
Czech Republic	Allowed	Allowed	Allowed	Allowed
Denmark	Forbidden: hot iron branding of horses. Freeze branding is allowed.	Allowed, provided it is carried out by a veterinarian using anaesthetics	Forbidden when the purpose is to modify the appearance of an animal	Allowed
Estonia	Allowed	Allowed	Allowed	Allowed
Finland	Allowed: freeze branding (according to Animal Welfare Decree, Section 23). Forbidden: hot branding.	Allowed when performed by veterinarian	Forbidden. In section 14 point 6a tail docking is prohibited in all species.	Allowed according to Animal Welfare Decree, Section 23
France	Allowed	Allowed, but shall be carried out by a veterinarian	Allowed, but banned from manifestations	Allowed
Germany	Freeze Branding: Forbidden. Hot Branding: Allowed, as of 2019 only with anaesthesia, and provided its done by a veterinarian	Allowed if done by veterinarian and with anaesthesia	Forbidden	Allowed
Greece	Allowed	Allowed	Allowed	Allowed, compulsory with effect from 2018

Procedure	Freeze or hot Branding	Castration	Tail docking	Chipping
Hungary	Allowed, according to Annex 6 to Decree 32/1999 (III. 31.) – but according to Act XXVIII of 1998 on the Animals Welfare, paragraph (3) of 10 – the smallest pain causing method should be applied	Allowed, according to Act XXVIII of 1998 on the Animals Welfare, paragraph (2) of 10. §	Forbidden for the purpose of changing the appearance of the animals, according to Act XXVIII of 1998 on the Animals Welfare, paragraph (2) of 10.	Allowed, according to Annex 6 to Decree 32/1999 (III. 31.)
Ireland	Freeze branding allowed, forbidden: hot iron branding.	Allowed	Allowed	Allowed
Italy	Allowed	Allowed	Allowed	Allowed
Latvia	Allowed, but not used identification method	Allowed	Forbidden	Allowed
Lithuania	Allowed	Allowed	Forbidden	Allowed
Luxembourg	Allowed, according to Règlement « Grand-Ducal du 31 juillet 1987 déterminant les interventions mineurs sur animaux pouvant être effectuées sans anesthésie »	Allowed, according to « Loi du 15 mars 1983 ayant pour objet d'assurer la protection de la vie et le bien-être des animaux »	Forbidden according to « Règlement Grand-Ducal du 18 mars 2000 déterminant les conditions de confort minima de détention et d'entretien des animaux de compagnie »	Allowed, according to « Règlement Grand-Ducal du 31 juillet 1987 déterminant les interventions mineures sur animaux pouvant être effectuées sans anesthésie »
Malta	Allowed	Allowed	Allowed	Allowed
Netherlands	Allowed: freeze branding (besluit diergeneeskunde artikel 2.6 lid d); Forbidden: hot branding	Allowed	Forbidden, but it i allowed to own a tail docked horse if docking is done in a country where it is legal.	Allowed
Poland	Allowed	Allowed	Allowed	Allowed
Portugal	Allowed	Allowed if done with anaesthesia and by a veterinarian	Allowed	Allowed
Romania	Allowed	Allowed	Allowed	Allowed
Slovakia	Allowed according to Act No 194/1998 Coll. on improvement and breeding of farm animals	Allowed, in accordance with the National Legislation (Art 22 2 b of the Act No 39/2007 Coll. on Veterinary Care As Amended)	Allowed	Allowed, in accordance with Act No 194/1998 Coll. on improvement and breeding of farm animals
Slovenia	Allowed	Allowed	Allowed	Allowed
Spain	Allowed	Allowed	Allowed	Allowed
Sweden	Forbidden: hot branding. Allowed: freeze branding, by a person with specialized training.	Allowed if done by veterinarian and anaesthesia.	Forbidden	Allowed. Microchip is allowed if done by veterinarian or other person with approved training
UK	Allowed in England / Wales for purposes of identification only. In Northern Ireland: hot branding only allowed when performed by a veterinary surgeon. Scotland: hot branding of horses is forbidden.	Allowed (but must be performed by a veterinary surgeon).	Forbidden in England / Wales / Scotland. Allowed in Northern Ireland (but must be performed by a veterinary surgeon).	Allowed, and in England / Wales / Scotland compulsory for horses born after 2009 under Horse Passports Regulations.

*No replies to our requests for information were received from CY, CZ, LU, MT, SI and RO. The data presented is our interpretation, and should be treated with caution.

5.3 Non-legislative initiatives

Our questionnaire to stakeholders and the internet search did not result in any examples of initiatives to ban painful management procedures in horse husbandry.

We looked into European and non-European horse documentation. Several breed standards and show guidelines were found. This included riding horses

(http://www.arabianhorses.org/registration/reg_rules.asp#133 and
http://www.registry.jockeyclub.com/registry.cfm?Page=tjcRuleBook)

and draft horses
http://www.percheronhorse.org/origin/default.html
http://www.clydesdalehorse.com.au/standards.html
http://www.irishdraught.ie/index.php?option=com_content&view=article&id=300&Itemid=294.

The latter refers to compulsory chipping of horses, but none of the draft horse breed standards explicitly forbid the docking of tails.

The same applies to show guidelines on Irish Draft Horses
(http://www.idhsgb.com/web/page.php/qualifier_guidelines#) and from the USA national show horse organisation (http://www.nshregistry.org/StaticPageDisp.asp?ID=35).

➔ It appears that mutilations such as tail docking are not an issue in guidelines for horse breeds.

6 Mutilations related to pigs

6.1 European legislation

The European legislation regarding mutilations of pigs is presented in Council Directive 2008/120/EC of 18 December 2008. It lays down the minimum standards for the protection of pigs, and can be found at: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0120&from=EN

The regulations state that "Tail-docking, tooth-clipping and tooth-grinding are likely to cause immediate pain and some prolonged pain to pigs. Castration is likely to cause prolonged pain which is worse if there is tearing of the tissues. Those practices are therefore detrimental to the welfare of pigs, especially when carried out by incompetent and inexperienced persons. As a consequence, rules should be laid down to ensure better practices".

The rules can be found in Article 8, which states that all painful interventions are prohibited, other than for identification reasons, or for therapeutic or diagnostic purposes.
There are some exceptions allowed, and these are:

- grinding or clipping teeth not later than the seventh day of life
- reducing the length of a boars' tusk to prevent injuries to other animals or for safety reasons
- tail docking (but not routinely)
- castration of male pigs
- nose-ringing of pigs kept outdoors

After the 7th day of life castration and docking of tails shall only be performed under anaesthetic and additional prolonged analgesia by a veterinarian.

The 'Recommendations concerning pigs' of the Standing Committee of the European Convention for the Protection of Animals kept for Farming Purposes (adopted December 2004) does not differ regarding painful procedures from the legislative requirements of Directive 2008/120/EC.

6.2 Legislation per EU member state

In Table 6.1 the EU legislation is compared to the national legislation of the 28 member states.

European legislators agree on allowing chipping, tattooing, vasectomising and castration

These four painful procedures are allowed in all MSs, with only two exceptions: Austria does not allow tattooing as a way to identify pigs and it is indicated that chipping is the preferred way of marking, and Belgium does not allow vasectomies to be performed. Castration is still allowed everywhere in the EU, but there are several legal initiatives under way. These aim either at banning castration without anaesthesia, to ban surgical castration completely, or both. Of these initiatives, only the Swedish rule that castration should be performed with the use of anaesthesia is in place (as of January 1st 2016), and the region of Brussels Capital has banned it completely.

- ➔ Recent developments regarding castration indicate an increased sense of urgency to ban this practice in Europe. See paragraph 6.4 of this report for more details.

Routine tail docking and teeth cutting is forbidden by all MSs

Almost all member states have implemented the EU directive to ban *routine* docking of tails in their legislation. At present there are only two exceptions: FI and SE have legislated for a complete ban on the procedure.
For removing the sharp points of needle teeth there are two options, clipping and grinding. Only Lithuania has banned both. DK, SE and NL have banned routine clipping, but not grinding. The likely

reason for this is that clipping may cause splintering of the tooth, and also because after clipping some sharp edges can still remain.

- ➔ Many European law enforcers seem to consider that the advantages of tail docking and teeth cutting still outweigh their disadvantages. There are only a few countries which disagree with that position. Please refer to paragraph 6.5 of this report for more discussion on Tail docking.

Ear notching and nose ringing continue to be allowed

Only a few countries have included a ban in their legislation regarding these two practices. AT, NL and DE have banned ear notching as a means of identifying pigs. Four countries have banned nose ringing: AT, DE, SE and FI.

Table 6.1.

A comparison of the legislation on painful management procedures in pigs of 28 EU member states and Council Directive 2008/120/EC.*

Green:	MS appears more strict than the Directive
Grey:	MS appears comparable to the Directive
White:	MS appears less strict than the Directive

Procedure	**Chipping**	**Tattooing**	**Ear notching**	**Nose ringing**	**Tail docking**	**Teeth cutting**	**Castration**	**Vasectomy**
Position	Allowed	Allowed	Allowed	Allowed	Forbidden	Forbidden	Allowed	Allowed
Article Of Directive 2008/120/EC	Annex 1, Ch 1, 8: all procedures intended as an intervention carried out for other than therapeutic or diagnostic purposes or for the identification of the pigs in accordance with relevant legislation and resulting in damage to or the loss of a sensitive part of the body or the alteration of bone structure shall be prohibited	Annex 1, Ch 1, 8: all procedures intended as an intervention carried out for other than therapeutic or diagnostic purposes or for the identification of the pigs in accordance with relevant legislation and resulting in damage to or the loss of a sensitive part of the body or the alteration of bone structure shall be prohibited	Annex 1, Ch 1, 8: all procedures intended as an intervention carried out for other than therapeutic or diagnostic purposes or for the identification of the pigs in accordance with relevant legislation and resulting in damage to or the loss of a sensitive part of the body or the alteration of bone structure shall be prohibited.	Annex 1, Ch 1, 8: nose-ringing only when the animals are kept in outdoor husbandry systems and in compliance with national legislation.	As routine practice, with exceptions according to Annex I, Ch 1, 8	As routine practice, but exceptions allowed according to Annex 1, Ch 1, 8: a uniform reduction of corner teeth of piglets by grinding or clipping not later than the seventh day of life of the piglets leaving an intact smooth surface; boars' tusks may be reduced in length where necessary to prevent injuries to other animals or for safety reasons	Annex 1, Ch 1, 8: Castration of males without anaesthesia is allowed within 7th day of life by other means then tearing of tissue	Not covered by EU or Council of Europe legislation.
Austria	Allowed	Forbidden. Marking the skin with ink is prohibited. Chipping is the desirable kind of identification.	Forbidden. Notching, clipping or punching the ear of an animal is prohibited. Tagging is possible.	Forbidden	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed

Procedure	Chipping	Tattooing	Ear notching	Nose ringing	Tail docking	Teeth cutting	Castration	Vasectomy
Belgium	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed (except in the Region of Brussels-Capital).	Forbidden
Bulgaria	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed. Ordinance № 21/ 14.12.2005	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Croatia	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3	Allowed, by Animal Protection Act OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3	Routinely forbidden, but exceptions allowed (Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3	Routinely forbidden, but exceptions allowed (Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- article 8. Paragraph 2. Item 1. And 3., paragraph 3
Cyprus	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Czech Republic	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Denmark	Allowed	Allowed	Allowed, in accordance with EU regulations	Allowed	Routinely forbidden, but exceptions allowed and shall take place between 2nd and 4th day of life, and no more than half of the tail must be docked	Forbidden: Tooth clipping in pigs – only grinding according to the conditions in the pigs directive, so not routinely. The grinding shall take place no later than the 4th day of life	Allowed. The castration shall take place within the 2nd and 7th day of life, be without tearing of tissue, and the animal shall be given analgesia.	Allowed, but shall be carried out by a veterinarian
Estonia	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed

Procedure	Chipping	Tattooing	Ear notching	Nose ringing	Tail docking	Teeth cutting	Castration	Vasectomy
Finland	Allowed	Allowed	Allowed	Forbidden, not listed in Section 23 of Animal Welfare Decree	Forbidden. In section 14 point 6a tail docking is prohibited in all species.	Routinely forbidden, but exceptions allowed	Allowed	Allowed when performed by veterinarian
France	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed, but shall be carried out by a veterinarian
Germany	Allowed	Allowed	Forbidden (ear tagging allowed)	Forbidden (when connected to tissue injury)	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed, as of 2019 only with anaesthesia	Allowed if done by a veterinarian
Greece	Allowed. Regulation 1760/2000 makes ear tagging compulsory according to rules provided.	Allowed. Regulation 1760/2000 makes ear tagging compulsory according to rules provided.	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Hungary	Allowed but not practiced in Hungary.	Allowed	Allowed, according to Annex 6 to Decree 32/1999 (III. 31.)	Allowed, according to Annex 6 to Decree 32/1999 (III. 31.) (when animals are kept in outdoor husbandry systems)	Routinely forbidden, but exceptions allowed according to Annex 6 to Decree 32/1999 (III. 31.)	Routinely forbidden, but exceptions allowed, according to Annex 6 to Decree 32/1999 (III. 31.)	Allowed, according to Act XXVIII of 1998 on the Animals Welfare, paragraph (2) of 10. §	Allowed, according to Act XXVIII of 1998 on the Animals Welfare, paragraph (2) of 10. §
Ireland	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Italy	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Latvia	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed

Procedure	Chipping	Tattooing	Ear notching	Nose ringing	Tail docking	Teeth cutting	Castration	Vasectomy
Lithuania	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Forbidden	Allowed	Allowed
Luxembourg	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Malta	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Netherlands	Allowed	Allowed	Forbidden	Allowed, also for breeding boars, where the safety of the farmer or animals is at risk	Routinely forbidden, but exceptions allowed only for piglets within the 4th day of life.	Allowed: not routine grinding, clipping is forbidden (besluit diergeneeskunde art. 2,3 lid c)	Allowed	Allowed, by a veterinarian only
Poland	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Portugal	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed, but not a routine practice
Romania	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Slovakia	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed, (Art 22 2 b of the Act No 39/2007 Coll. on Veterinary Care)	Allowed, (Art 22 2 b of the Act No 39/2007 Coll. on Veterinary Care)
Slovenia	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed
Spain	Allowed	Allowed	Allowed	Allowed	Routinely forbidden, but exceptions allowed	Routinely forbidden, but exceptions allowed	Allowed	Allowed

Procedure	Chipping	Tattooing	Ear notching	Nose ringing	Tail docking	Teeth cutting	Castration	Vasectomy
Sweden	Allowed. Microchip is allowed if done by veterinarian or other person with approved training.	Allowed	Allowed but only for breeding pigs. Other pigs shall be marked by ear tags.	Forbidden	Forbidden	Forbidden: clipping. Allowed: grinding, but not routinely, only if there is damage on other animals. Not older than 7 days	Allowed without anaesthesia but with analgesia until the first of January 2016. From the first of January 2016 only allowed if anaesthesia is used.	Allowed if done by veterinarian.
UK	Allowed.	Allowed.	Allowed	Allowed	Routinely forbidden, but exceptions allowed.	Routinely forbidden, but exceptions allowed.	Allowed, but rarely practised in the UK.	Allowed. Northern Ireland: only by a veterinary surgeon.

*No replies to our requests for information were received from CY, CZ, LU, MT, SI and RO. The data presented is our interpretation, and should be treated with caution.

6.3 Non-legislative initiatives

In Table 6.2 examples of initiatives are presented which address mutilations. A total of 16 examples were found, almost all of which are related to quality assurance schemes. They involve only 5 MSs, with Germany having the largest share of initiatives. Means to identify pigs (notching, chipping, tattooing) are hardly referred to. Vasectomies are not mentioned. The schemes focus on four practices: tail docking, castration, reduction of teeth and nose ringing.

Surgical castration on its way out?

The legislators of EU member states all allow surgical castration, yet there are several schemes which ban castration, and also a large number which prescribe conditions such as the use of anaesthesia or the level of qualification of the operator. The overview table does not present all the initiatives found on the internet which source pork from entire male pigs. Many supermarkets in Belgium and Germany and all supermarkets in The Netherlands have pledged not to sell fresh pork from surgically castrated males. In addition to this, they source a growing number of other pork products complying with this requirement. In 2010 several European pig industry partners signed a declaration with the ambition to end surgical castration by 2018. For a detailed discussion see paragraph 6.4.

➔ Surgical castration of male pigs appears to be in decline.

Nose ringing and tail docking are often banned

Quality assurance schemes addressing nose ringing and tail docking generally go for a complete ban. There are only a few exceptions regarding docking, in which the assurance scheme requires tails to be kept at a certain length, rather than ban docking completely (Freedom Food – UK; Beter Leven 1 Star – NL).
There are at least three examples of initiatives that ban tail docking, which are not related to quality assurance schemes. One is a joint industry approach called 'Krulstaart' (curly tail) in the Netherlands, which looks into farmer strategies to stop docking. The other two are non-legislatives initiatives supported by the German federal ministry (BMEL) and by the Lower Saxony government. In the latter, the 'Ringelschwanzprämie' of the government of Lower Saxony (DE) rewards farmers who manage to keep the tails of their pigs intact (for details see paragraph 6.5).

➔ It appears that the quality assurance schemes investigated consider nose ringing and tail docking to be practices which can be avoided by the farmers they buy their pork from.

Grinding teeth is considered less painful than clipping

There are relatively few assurance schemes which ban teeth reduction completely. Rather than forbidding the removal of the tips of the needle teeth of piglets, the schemes generally chose to prescribe the way it is performed: not by clipping, but by grinding.

➔ Teeth grinding is accepted as a method to remove the sharp needle teeth of piglets.

Table 6.2.

Examples of quality assurance schemes and other initiatives in EU member states which include a reduction of painful management procedures in pigs.

	Initiative	Category	Initiator	Type of mutilation	cf EU Legisl	cf National	Position
EU	Brussels Declaration (2011)	Industry initiatives	EU Commission + Belgium presidency 2010	**Castration**	+++	+++	Castration with analgesia from 2012, ban on castration in 2018
DE	"Für mehr Tierschutz" Tierschutzlabel	Market initiative	Deutscher Tierschutzbund e.V.	**Castration**	++	++	Castration only with anaesthesia by a veterinarian
DE	Initiative Tierwohl	Industry & government initiative	Pig Industry & Federal Ministry	**Castration**	++	++	Castration only with anaesthesia
DE	Neuland	Food label	3 German NGOs	**Castration**	++	++	Castration only with anaesthesia
DK	Velfærdsdelikatesser	Food label	Danish Organic label	**Castration**	+++	+++	Forbidden
NL	Beter leven: 1 star	Food label	Dutch animal protection society	**Castration**	+++	+++	Forbidden
NL	Declaration of Noordwijk (2007)	Industry initiative	Dutch NGOs + industry partners	**Castration**	+++	+++	Castration with analgesia from 2009, ban on castration in 2015
NL	Good Farming Star Animal Health Management scheme	B2B	Vion NL + Germany COOP Kiel, and Kaiser´s Tengelmann	**Castration**	+++	+++	Forbidden
NL	Keten Duurzaam Verkensvlees	Food label	Farmers + Food service industry	**Castration**	+++	+++	Forbidden
SE	KRAV	Food label	Swedish Organic Standards	**Castration**	++	=	Castration only with anaesthesia
SE	Svenskt Sigill	Food label	Swedish industry	**Castration**	++	+	Allowed, with anaesthesia and pain relief
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Castration**	+++	+++	Forbidden
UK	RSPCA Assured	Food label	UK animal protection society	**Castration**	+++	+++	Forbidden: surgical castration. Allowed: Improvac
UK	Soil association	Food label	UK Organic Standards	**Castration**	+++	+++	Forbidden
UK	RSPCA Assured	Food label	UK animal protection society	**Ear notching**	+	+	Allowed, only one ear notched and not more than one notch
DE	"Für mehr Tierschutz" Tierschutzlabel	Market initiative	Deutscher Tierschutzbund e.V.	**Nose ringing**	+++	=	Forbidden
DE	Neuland	Food label	3 German NGOs	**Nose ringing**	+++	=	Forbidden
DK	Velfærdsdelikatesser	Food label	Danish organic label	**Nose ringing**	+++	+++	Forbidden

	Initiative	Category	Initiator	Type of mutilation	cf EU Legisl	cf National	Position
UK	RSPCA Assured	Food label	UK animal protection society	**Nose ringing**	+	+	Allowed, only with permission
UK	Soil association	Food label	UK Organic Standards	**Nose ringing**	+++	+++	Forbidden
UK	Whole foods 1-5+	Food label	Global not-for-profit Partnership	**Nose ringing**	+++	+++	Forbidden
DE	BIOLAND	Food label	DE Organic Standards	**Tail docking**	+++	+++	Forbidden
DE	Ringelschwanzprämie	Subsidy	Lower Saxony Ministry for Rural Areas, Nutrition, Agriculture and Consumer Protection	**Tail docking**	+++	+++	Forbidden
DE	New ways to improve animal welfare	Government + Industry	BMEL supported industry initiative	**Tail docking**	+	+	Aiming to make tail docking redundant
DK	Velfærdsdelikatesser	Food label	Danish Organic label	**Tail docking**	+++	+++	Forbidden
NL	Beter leven: 1 star	Food label	Dutch animal protection society	**Tail docking**	+	+	Allowed, but kept relatively long
NL	Beter leven: 2 stars and 3 stars	Food label	Dutch animal protection society	**Tail docking**	+++	+++	Forbidden
NL	Good Farming Star Animal Health Management scheme	B2B	Vion NL + Germany COOP Kiel, and Kaiser´s Tengelmann	**Tail docking**	+	+	Allowed, but kept relatively long
NL	Krulstaart project	Communication, training & research	Dutch farmers, Animal Protection Society, government and science	**Tail docking**	+	+	Aiming to make tail docking redundant
SE	KRAV	Food label	Swedish Organic Standards	**Tail docking**	+++	=	Forbidden
SE	Svenskt Sigill	Food label	Swedish industry	**Tail docking**	+++	=	Forbidden
UK	RSPCA Assured	Food label	UK animal protection society	**Tail docking**	+	+	Allowed, only with permission: the tip of the tail or to a minimum 6cm
UK	Soil association	Food label	UK Organic Standards	**Tail docking**	+++	+++	Forbidden
UK	Whole foods 1-5+	Food label	Global not-for-profit Partnership	**Tail docking**	+++	+++	Forbidden
DE	BIOLAND	Food label	DE Organic Standards	**Teeth cutting**	+	+	Allowed, in emergencies
DE	Neuland	Food label	3 German NGOs	**Teeth cutting**	++	++	Forbidden: clipping. Allowed: grinding
SE	KRAV	Food label	Swedish Organic Standards	**Teeth cutting**	++	=	Forbidden: clipping. Allowed: grinding
SE	Svenskt Sigill	Food label	Swedish industry	**Teeth cutting**	++	=	Forbidden: clipping. Allowed: grinding
UK	RSPCA Assured	Food label	UK animal protection society	**Teeth cutting**	+	+	Allowed, only with permission
UK	Soil association	Food label	UK Organic Standards	**Teeth cutting**	+++	+++	Forbidden
UK	Whole foods 1-6	Food label	Global not-for-profit Partnership	**Teeth cutting**	++	++	Forbidden: clipping. Allowed: grinding
UK	Whole foods 5 and 5+	Food label	Global not-for-profit Partnership	**Teeth cutting**	+++	+++	Forbidden

6.4 Focus mutilation: surgical castration of pigs

6.4.1 Prevalence of the practice

The EU has a yearly production of over 250 million pigs for slaughter each year. Of this around 60% is produced in Germany, Spain, France and Poland. Around 1.2 million tonnes of pork meat and processed pork meat were exported to third countries in 2013 (5.4% of total slaughter), with Denmark, Germany, Spain and the Netherlands contributing 75% to this amount (Eurostat, 2014). The current number of pigs in the Netherlands is around 12.1 million, of which around 1 million sows. Around 20 million slaughter pigs are produced annually (Backus, pers. comm.).

Overall, around 80% of the male piglets in the EU are castrated to reduce boar taint, and aggressive and sexual behaviour (EFSA, 2004). Boar taint is described as a strongly and unpleasant combination of odour, flavour and taste in heated pork meat, caused by the naturally occurring compounds androstenone and skatole in male pigs from the start of sexual maturity (Zamaratskaia, 2009). The prevalence of the practice varies widely across Europe, and is changing relatively quickly. Figure 6.1 shows the percentage of non-castrated males in 2006 and 2014.

Figure 6.1: *Percentage non-castrated male pigs in selected EU countries during in 2006 and in 2014.*

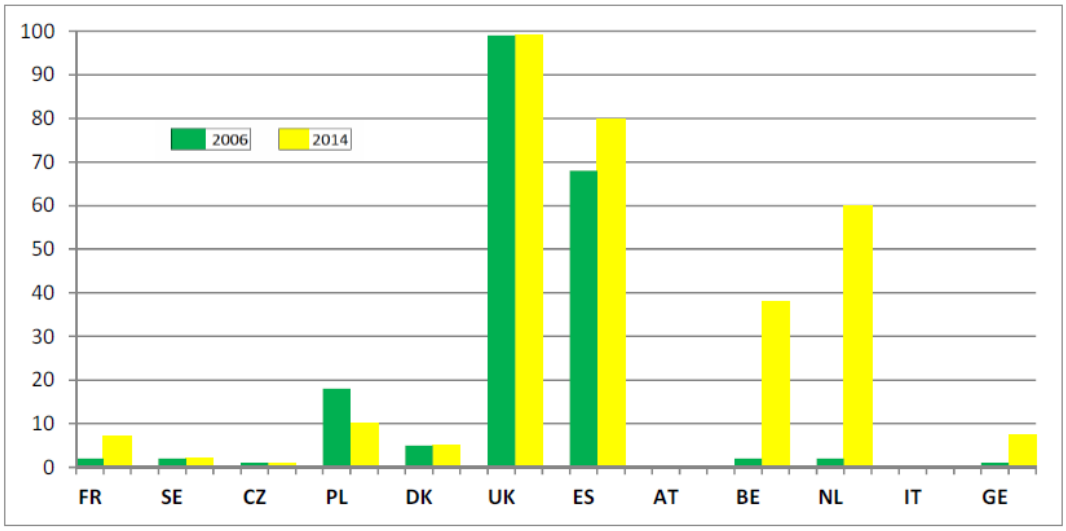

Figure reproduced with permission from Backus et al., 2014.

6.4.2 Mitigating the negative welfare consequences

Surgical castration is painful, resulting in increased levels of cortisol, adrenocorticotropic hormone (ACTH) and lactate, increased heart rate and behavioural changes (Prunier et al., 2006; Rault et al., 2011). In addition to post-surgical complications like haemorrhaging and excessive swelling, it can lead to reduced performance of growth, the immune system and health (Marx et al., 2003) and thereby impair the welfare of pigs.

To reducing the pain of surgical castration, it can be performed under general or local anaesthesia. Prunier et al. (2006) have reviewed the literature. General anaesthesia can be performed by injection or gas mixtures. They affect the behaviour of the piglets for prolonged periods of time and make them more vulnerable to getting overlain by the sow. It takes a long time before suckling resumes after the surgery. General anaesthesia induced by injection (e.g. ketamine or tiletamine) can only be used by veterinarians, and have so far only been tested under experimental conditions. Gaseous anaesthetics, such as isoflurane, halothane and carbon dioxide (CO_2), were tested in practice. The first two are (isoflurane and halothane) are dangerous, require gas evacuation systems and contain ozone-

destroying halogens. CO_2 is aversive to pigs (Raj & Gregory, 1995). One hour after castration, pigs anaesthetized with CO_2 presented higher levels of cortisol and β-endorphin than pigs not anaesthetized (Schönreiter et al 2000). Prunier et al. (2006) conclude that performing general anaesthesia for castrating pigs in commercial herds has too many drawbacks.

Options for local anaesthesia include the application of lidocaine injection into the testes or into the testes and the scrotal sac. This has been shown to reduce the pain-related calls (White et al 1995) as well as ACTH and cortisol responses to castration (Prunier et al 2002). Bupivicaine has been tried as an alternative to lidocaine but was considered less suitable (Prunier et al., 2006).

To reduce the pain after the operation, non steroidal anti-inflammatory drugs (NSAIDs) can be used. They are the only group of 'long-lasting' analgesics currently available for pigs. Although several NSAIDs are licensed for pigs, there is some but not much documentation available concerning their efficacy in relieving pain after castration (Prunier et al., 2006).

The combination of both anaesthesia and analgesia will result in longer pain reduction. However, the associated increase in work load and costs for the farmer are negative side effects. Furthermore, the NGO support is relatively low as the performance of castration could be banned totally and substituted by other alternative methods.

An alternative to surgical castration is immuno-castration, or active immunization against GnRH. GnRH stimulates the secretion of luteinizing hormone (LH) and follicle stimulating hormone (FSH), which controls the production of testicular steroids. Vaccination against GnRH reduces the concentration of testicular steroids, including androstenone, along with the size of reproductive organs and sperm numbers (Rydhmer et al., 2010). Immuno-castration became available in Europe in 2009, but was received with mixed feelings: 'Many people in the pig industry fear that immuno-castration would have an adverse effect on the public's image of pork meat' (FVE, 2009). It can be argued that this fear mainly exists among retailers, with respect to lacking consumer acceptance. The use of the vaccine comes at a cost to the farmer.

Another strategy aims at not castrating at all and thus raising entire males. This alternative has several positive aspects like enhanced feed conversion, higher proportion of lean meat in the carcass (Walstra, 1974) and lower output of nitrogen to the environment (Desmoulin et al., 1974). On the downside, higher levels of aggression and excessive mounting behaviour may occur compared to the rearing of castrates. As a result, there is an increased risk of skin injuries and lameness in pigs through fights, which may ultimately lead to carcass damage (Rydhmer et al., 2010). Hence, the production of entire males requires adjustments to the management and husbandry system to safeguard animal welfare and pig performance.

6.4.3 Legislative initiatives to reduce surgical castration of pigs

Directive 2008/120/EC of 18 December 2008 allows castration of male pigs in the European Union, before the pig's 7th day of life without anaesthesia. This legislation was adopted by all MSs, but there are several new legal initiatives under way. As discussed above, these aim at banning castration without anaesthesia, or to ban surgical castration completely, or both. The only MS which has actually implemented additional legislation is Sweden: as of January 1st 2016 castration should be performed with the use of anaesthesia. In the Belgium region of Brussels Capital castration is banned completely. In Denmark, the use of analgesia is recommended but not made compulsory. In Germany, castration must be performed with the use of anaesthesia from 2019 onwards.

6.4.4 Non-legislative initiatives to reduce surgical castration of pigs

Despite the legal similarity across EU member states, there are considerable differences in practice. In the United Kingdom and Ireland piglets are generally not castrated: entire male pig production has prevailed since 1970, and pigs are slaughtered at a relatively low live weight of around 85kg. In Portugal and Spain raising entire male pigs is also the dominant practice. Portugal and Spain produce

80% entire male pigs and 20% castrated males, the latter which are mainly used for Iberico ham production (5-8%) and from other extensive production systems (12-15%). In the Netherlands there was a rapid shift to raising entire males: in 2009 less than 5% and in 2013 over 50% of boars were raised as entire males (Backus, 2014).

The developments started in 2007 and 2008, when several Dutch animal welfare organizations launched public campaigns to raise awareness among consumers of the pain involved in castration. They also threatened several large supermarket chains in The Netherlands with prosecution for causing unnecessary animal suffering, because they purchased their pig meat from suppliers that castrated all their male pigs (Eyes on Animals, 2009). The pig industry, NGOs and retailers agreed on a joint 'Declaration of Noordwijk' (signed in November 2007) in which the Dutch pig sector agreed on the ambition to ban castration of male piglets by 2015. A number of efforts to support this ambition have since then been undertaken. Among them was a five-year research program called "Stopping the castration of piglets" (2009-2013). The Noordwijk partners initiated the project, and set up an integrated approach aimed at limiting the occurrence of meat with an off-flavour. Quality pork is a pre-condition for realizing market and industry acceptance of meat from entire males. Other aspects of the project included research into husbandry aspects to avoid excessive mounting and aggressive behaviour on farms with entire male pigs (Backus 2014). By the end of 2009 approximately 1/3rd of the total consumption of meat coming from male pigs in the Netherlands came from intact boars (Eyes on animals, 2009). By that time a large number of Dutch supermarket chains had indicated to stop sourcing pork from castrated animals.

The Dutch initiative was followed by a European declaration. After a workshop organised by the European Commission and the Belgian Presidency of 2010 on alternatives for pig castration, representatives from European farmers, the meat industry, retailers, scientists, veterinarians and animal welfare NGOs signed the 'European Declaration on alternatives to surgical castration of pigs' in 2011. The agreement contains two steps, firstly to only apply castration with prolonged analgesia and/or anaesthesia in 2012 and secondly to end surgical castration throughout the EU in 2018. The parties indicated they wish to use the market to solve the issue (Backus et al, 2014).

An overview of the current situation of the main pig production countries in the EU can be found in Table 6.3, which is based on data provided by Backus et al. (2014). It appears that although progress is made, most of the EU countries have to take significant further steps to meet the self-imposed schedule of the Brussels declaration (Backus et al., 2014).

Table 6.3.
Overview of the situation in the main pig production member states of the EU (modified from Backus et al., 2014).

Country	Main castration method	Perceived sense for change
Austria	Surgical castration with prolonged analgesia (compulsory by law)	Research focuses on pain reduction methods of castration
Belgium	Immuno-castration and raising entire male pigs	Meat from entire male pigs or from immuno-castrated pigs
Czech rep.	Surgical castration without anaesthesia and analgesia	No sense of urgency on this issue in Eastern European society
Denmark	Surgical castration with prolonged analgesia (compulsory by law), (Entire males: 5%)	2014: "Welfare Summit" including ban of castration without anaesthesia not later than 2018
Finland	Surgical castration without anaesthesia and analgesia	Anaesthesia or analgesia perceived as possible directions
France	Surgical castration with prolonged analgesia (95% producers), (Entire males: 7%)	2012: Cooperl Arc Atlantique (20% market share introduced entire-males (70% of Cooperl production).
Germany	Using analgesia since April 2009 (Entire males: 5-10%)	Ban of castration without the anaesthetic from 2019 onwards
Hungary	Surgical castration without anaesthesia and analgesia	No sense of urgency on this issue in Eastern European society
Italy	Surgical castration, some with analgesia	Italian pig production focusses on Parma production (slaughter weight of 160kg) entire male production no option
Netherlands	Surgical castration with (CO_2-) anaesthesia (Entire males: 65%)	'Declaration of Noordwijk' (see Text)
Poland	Surgical castration without anaesthesia and analgesia	No sense of urgency on this issue in Eastern European society.
Portugal	Surgical castration without anaesthesia and analgesia, (Entire males: 80%)	
Romania	Surgical castration without anaesthesia and analgesia	No sense of urgency on this issue in Eastern European society.
Sweden	Surgical castration with prolonged analgesia (Entire males: 1-2%)	General anaesthesia compulsory from 2016 onwards.
Spain	Surgical castration without anaesthesia and analgesia, (Entire males: 80%)	Prolonged analgesia is perceived as an alternative solution by Iberico producers.
UK	No castration, (Entire males: 100%)	

Backus et al. (2014) conclude:

1. As not all castrated piglets are treated with prolonged analgesia and/or anaesthesia, more efforts have to be made in line with the commitments of the Declaration.
2. Companies are still facing a complex transition with market barriers related to institutional, organizational and social-cultural aspects. Additional actions of those involved parties are required.
3. There is a need for more coordination of the national research projects.

6.4.5 Strengths and weaknesses of initiatives to reduce castration of pigs

Table 6.4 is based on the examples found and telephone discussions with the representatives of non-legislative initiatives aiming to reduce castration. It summarises the status, strengths and weaknesses of the main routes identified to reduce the mutilation, and proposes a conclusion regarding each of them.

Table 6.4.

Comparative analysis of different initiatives to reduce castration of pigs in Europe

Reduce castration through	Status	Weaknesses of this type of initiative	Strengths of this type of initiative	Conclusion
EU legislation	No legislation (i.e. no ban)	Difficult to reach consensus between all MS, farmer becomes 'problem owner' without solutions	Clarity and uniformity, level playing field across Europe	Unlikely alternative for the short and medium term
CoE recommendations	Recommendations since 1992 (no ban)	Consensus result of negotiations (thus conservative)	Applicable across Europe	Low feasibility to ban castration
National legislation	Some MS take initiatives towards pain reduction and banning?	'Uneven playing field', farmer becomes 'problem owner' without solutions	Tailored to local needs and opportunities	May follow in some MSs if market conditions become more favourable
Market based instruments	Present in small but growing number of MS (castration banned or anaesthesia required)	Schemes are present in a limited number of MSs, success dependant on 'willingness to pay' and NGO pressure on supermarkets	Tailored solutions, financial incentive for farmers, best practices can facilitate compliance	Rapidly increasing in importance
Industry 'Declarations'	Brussels Declaration 2011 phases out castration	No legal power: voluntary scheme	All chain partners involved	Promising way forward. Requires practical solutions for the industry, and pressure from NGOs

6.5 Focus mutilation: tail docking of pigs

6.5.1 Prevalence of the practice

Docking the tail of a young pig is the most common way to prevent tail biting of the animals at a later age. Tail biting can be a serious problem on pig farms. Bracke et al. (2013) estimates that around 50% of Dutch pig farms are affected, and that approximately 2.1% of tail docked finisher pigs still suffer from tail biting in The Netherlands (Zonderland et al., 2011). The estimated financial costs due to tail-damage are €9.26 per pig and approximately 8 million euros per year, and include pigs which are tail docked (Zonderland et al., 2011).

Tail biting starts with 'tail in mouth behaviour': nibbling the tail of one pig by another pen mate. The nibbling can result in swellings and bite wounds of the tail, which may trigger a further increase of tail-biting behaviour in the whole pen caused by the smell and taste of blood (Taylor, 2010). Tail-biting may lead to cannibalism, infections and ultimately the occurrence of death. Infections may cause the health status to decrease further, with impaired growth and death of the animals as possible outcomes.

There are several risk factors associated with this damaging behaviour. The most frequently mentioned factors in literature are high stocking densities, low climate quality (high ammonia concentrations, draught and too much light), frustration due to poor environmental conditions, lack of fresh water supply or inadequate nutrition increase the risk of tail-biting incidences (e.g. Schrøder-Petersen and Simonsen, 2001; Sonoda et al., 2012). Moreover, internal factors like age, sex and tail length may influence the occurrence of tail-biting in pigs. Tail-biting is heritable and more likely to develop in pigs of landrace breeds (Schrøder-Petersen and Simonsen, 2001; Spoolder et al., 2011).

Tail docking reduces the chance of a tail biting outbreak considerably (e.g. EFSA, 2007a), and therefore tail docking is a common measure to control the symptoms of tail-biting (Sonoda et al., 2013). It consists of the amputation of the distal part of the tail (Schrøder-Petersen and Simonsen, 2001), using e.g. teeth clippers, cutting pliers, scissors, scalpel blades, and gas- or electrical cautery iron (Sutherland and Tucker, 2011; Zimmerman et al., 2012).

The vast majority of fattening pigs in Europe are tail docked. Exceptions are pigs in Sweden and Finland (where the practice is forbidden), and pigs reared as part of certain quality assurance schemes (such as Demeter or other organic schemes).

6.5.2 Mitigating the negative welfare consequences

Tail docking can lead to several welfare implications like long-term chronic pain, infections or reduced feed intake and may cause neuromas and degenerative nerve changes (Sutherland et al., 2008). Additionally, tail docked pigs showed increased restlessness, foot stamping, head-turning, blood cortisol concentrations, sitting and abnormal postures and reduced white blood cell counts (Sutherland et al., 2008). The effect on welfare depend, among others, on the length of the tail that is docked. Further, docking of tails may increase the risk of redirected biting behaviour to other body parts like legs and ears (Fraser and Broom, 1990).

Comparisons between the hot iron method versus cold clipping (with 'blunt trauma cutters') provide inconclusive results: although the conventional cutting pliers showed a higher physiological stress response as measured by cortisol levels than the cautery iron method (Sutherland et al., 2008), the cautery iron increased squealing behaviour and handling time compared to cold clipping. From a welfare point of view, the difference (if any) seems irrelevant: the fact that the animals need to undergo either of these procedures means that for the remainder of their lives they will be housed in suboptimal circumstances, which do not sufficiently address their behavioural needs (EFSA, 2007a). Therefore, the best mitigating approach is to adapt the housing conditions to minimise the risk factors for tail biting.

6.5.3 Legislative initiatives to reduce tail docking in pigs

As described above, *routine* tail docking is banned throughout the European Union (Directive 2008/120/EC), but only two countries have actually imposed a *complete* ban: Finland and Sweden. In all other countries docking is carried out on virtually all piglets, and can therefore considered to be done routinely. Denmark is the only country which added an additional requirement, i.e. that not more than half the tail should be removed.

6.5.4 Non-legislative initiatives to reduce tail docking in pigs

We found 12 examples (five organic, seven non-organic), most of which are from quality assurance schemes. The majority of the initiatives forbid tail docking, and some have rules on the length of the tail which should remain.

An interesting 'outlier' is the Dutch Krulstaart project, which is an initiative of LTO Nederland and the Dutch Society for the Protection of Animals (Dierenbescherming). Krulstaart has set up a working group comprising of representatives from various interested parties within the pork chain: LTO, the Dutch Society for the Protection of Animals, veterinary surgeons, breeders, slaughterhouses, the animal feed industry and government bodies. The idea is to start a gradual process of changing the environment in which the animals are kept to reduce the occurrence of biting, and at the same time to develop measures to mitigate any outbreaks of tail biting on farms with long tails. This 'safety net' is an important step in making the change to undocked pigs acceptable.

Another notable approach is the voluntary ban on tail-docking within the 'Ringelschwanzprämie' (Curly tail premium) in Germany, started in July 2015 by the Lower Saxony Ministry for Rural Areas, Nutrition, Agriculture and Consumer Protection. Embedded in the ELER program of animal welfare (which in turn is part of the PFEIL program of the European Agricultural Fund for Rural Development) a fund of 28 million euro was created to support keeping pigs with entire tails (incidentally, the fund also covers keeping beaks of hens intact). The fund will be available until 2020. For the first year (2015-2016), 1.9 million euro has been set aside. Farmers have to apply to the scheme and when admitted, commit themselves to several points they chose in their application regarding conditions on their farm. These include items like previous experience with the rearing of pigs with undocked tails,

providing additional space, enrichment material and creating small group sizes. The simultaneous rearing of docked and undocked animals in a group is not allowed. For farms that start from scratch, it is recommended they first start with 200 animals and then gradually extend the number of animals (http://www.agrarheute.com/news/schwanzpraemie-1650-euro-gibt-je-mastschwein). Training for participating farmers is compulsory (additional training opportunities have been offered by the Ministry). After one year, the producer has to apply again, and the volume of the premium will increase related to the number of pigs involved. The fund will pay 16.50 euro per pig with an intact tail, up to a maximum of 1000 pigs per fattening period per farm. A t least 70% of the pigs must show intact tails, for the premium to be paid for the whole batch.

The premium must be considered a starting point: it covers only a relatively small part of the population. Currently, the number of pigs in Lower Saxony is approximately 8.83 million. The current number of conventional pig farmers involved in the 'Ringelschwanzprämie' is 81 pig farmers (75% of all applicants) including around 100.000 animals. Although positively received by some parties, there are three main critiques to the premium. It is argued that the payment is a hidden subsidy to organic and free range producers (who have signed up en mass) (http://www.wir-sind-tierarzt.de/2015/08/ringelschwanzpraemie_niedersachsen-moderate-nachfrage/), and that the scheme is far too lenient by requiring a minimum of 70% of all tails to be long and undamaged for each batch of 1000 animals (http://www.agrarnetz.com/thema/ringelschwanz-praemie). Finally, the scheme is a subsidy, and not driven by market demand. This poses risks once the subsidy period is over, and producers receive no more payment for their intact pigs. The protagonists of the scheme hope that by then the practice of rearing pigs without docking is sufficiently secured in the farming community.

In addition to the Lower Saxony initiative, the German ministry (Bundesministerium für Ernährung und Landwirtschaft -BMEL) actively supports voluntary agreements currently set up with German industry partners to ban tail docking of pigs. BMEL brings together science, industry and animal welfare groups and moderates the process. The timeline will be based on advances in science and practice that BMEL supports through pilot and demonstration projects (BMEL, 2014).

6.5.5 Strengths and weaknesses of initiatives to reduce tail docking in pigs

Table 6.5 is based on the examples found and telephone discussions with the representatives of non-legislative initiatives aiming to reduce tail docking. It summarises the status, strengths and weaknesses of the main routes identified to reduce the mutilation, and proposes a conclusion regarding each of them.

Table 6.5.

Comparative analysis of different initiatives to reduce tail docking of pigs in Europe

Reduce docking through	Status	Weaknesses of this type of initiative	Strengths of this type of initiative	Conclusion
EU Legislation	Directive 2008/120/EC bans routine docking	Difficult to reach consensus between all MS, farmer becomes 'problem owner' without solutions	Clarity and uniformity, level playing field across Europe	Unsuccessful in banning docking
CoE recommendations	Recommendations since 2004 (no ban on docking)	Consensus result of negotiations (thus conservative)	Applicable across Europe	Unsuccessful in banning docking
National legislation	Present (but only 2 MS have banned docking)	'Uneven playing field', farmer becomes 'problem owner' without solutions	Tailored to local needs and opportunities	Success limited to some MS
Quality assurance	Present in small number of MS (docking is banned by nearly all of them)	The schemes are present in a limited number of MSs, dependency on 'willingness to pay'	Tail docking is a priority in several schemes, provides financial incentive for farmers, best practices can facilitate compliance	Success is limited to a relatively small part of Europe,
Subsidy programme	Started with 81 farms in 2015	Income support (not market driven), includes mainly farmers who do not dock, low standard	Voluntary, broad support through science and training	Potentially promising. A lot depends on success of training and housing changes. Wait & see.

Stakeholder network	E.g.: Krulstaart has been ongoing for 3 years (limited following by farmers)	Progress is slow, depends on commitment by all, no market 'pull' yet.	Voluntary, broad support from science and training	Potentially promising. Dependent on success of science and training, and market demand.

7 Mutilations related to poultry

7.1 European legislation

Council Directive 1999/74/EC of 19 July 1999 lays down the minimum standards for the protection of laying hens, and can be found at http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31999L0074&from=EN. The directive refers to beak trimming of laying hens in the Annex, at point 8: "Without prejudice to the provisions of point 19 of the Annex to Directive 98/58/EC, all mutilation shall be prohibited. In order to prevent feather pecking and cannibalism, however, the Member States may authorise beak trimming provided it is carried out by qualified staff on chickens that are less than 10 days old and intended for laying." There is no mention of the nature of the trimming method, nor of the frequency of application (routinely or incidentally). Beak trimming is thus allowed according to EU legislation.

There are no other painful management procedures addressed in Directive 1999/74. However, the Council of Europe had previously issued recommendations on the welfare of domestic fowl in 1995. These were adopted by the The Standing Committee of the European Convention for the Protection of Animals kept for Farming Purposes on 28 November 1995, and can be found at: http://www.coe.int/t/e/legal_affairs/legal_co-operation/biological_safety_and_use_of_animals/farming/Rec%20fowl%20E.asp#TopOfPage

Article 21.2 of the recommendations refers to de-toeing and dubbing, and allows these practices within the first 72 hours of life. It also allows removing the tip of the beak. Pinioning (removal f part of the wing) is not referred to as an exception to the general rule in Article 21.2. EU Directive 1999/74/EC also states that all mutilations shall be prohibited. So pinioning is not allowed in the EU.

7.2 Legislation per EU member state

In Table 7.1 the EU legislation is compared to the national legislation of the 28 member states.

Beak trimming is allowed almost throughout the entire EU

Beak trimming is only forbidden in Finland and Sweden, although there are at least two MSs who have put restrictions on the methodology used (NL and UK require an infrared technique to be applied, to replace the conventional hot blade method). There are two MSs (Austria and Denmark) who claim that although it is not forbidden, it is hardly practiced because of a voluntary ban by the sector itself. See also paragraph 7.4 of this report.

- ➔ It is remarkable that a painful management procedure which is not commercially applied in a country which legally allows it (AT, DK), is still allowed by law in virtually all countries of the EU.

De-toeing and dubbing are allowed – except in a few MSs

There is only one country (Croatia) which has banned de-toeing, all others follow the CoE recommendations, and allow de-toeing within the first days of life. There is a more divergence regarding dubbing: 8 MSs have banned this practice (AT, BE, HR, FI, DE, HU, LI and SE). The Netherlands is the only country which makes a difference between bird strains: dubbing of brown birds is banned, but not white birds.

- ➔ The apparent divergence between MSs suggest there are legislative considerations for and against a ban on dubbing, which should be further explored in an attempt to get agreement on a ban across the EU.

Pinioning is not accepted in the EU

Only Belgium, Ireland and Hungary allow pinioning in farmed animals, the other member states agree with the CoE recommendations that it should be banned, in compliance with Directive 1999/74.

- ➔ It is unclear if BE, IE and perhaps HU are not implementing CoE recommendations and/or EU directive 1999/74/EC on this point. BE appears to practice pinioning only on species other than *Gallus gallus* (chickens) covered by Directive 1999/74/EC.

Table 7.1.

A comparison of the legislation on painful management procedures in poultry of 28 EU member states and Council Directive 1999/74/EC and the Council of Europe recommendations concerning Domestic Fowl (Gallus gallus) from 1995 adopted by the Standing Committee of the European Convention for the Protection of Animals kept for Farming Purposes, 28 November 1995.*

Green:	MS appears more strict than CoE
Grey:	MS appears comparable to CoE
White:	MS appears less strict than CoE

Procedure	Beak trimming	De-toeing	Dubbing	Pinioning
	Allowed	Allowed	Allowed	Forbidden
EU or Council of Europe rule or position	EU Directive 1999/74/EC, Annex point 8: In order to prevent feather pecking and cannibalism, however, the Member States may authorise beak trimming provided it is carried out by qualified staff on chickens that are less than 10 days old and intended for laying	CoE 1995, Article 21 2: in the case of male breeding birds, the removal, within the first 72 hours of life, of the first phalanx of the toe directed backwards and that of the inside toe	CoE 1995, Article 21 2: dubbing (removal of part of the comb) within the first 72 hours of life	CoE 1995, Article 21 2: the mutilation of birds shall be generally prohibited. EU Directive 1999/74/EC, Annex at point 8: all mutilation shall be prohibited
Austria	Allowed on pullets less than ten days old, but pullets reared for the Austrian market are generally not trimmed.	Allowed	Forbidden	Forbidden
Belgium	Allowed	Allowed	Forbidden	Allowed, but only for birds that are kept in non-enclosed spaces or for pheasants, partridges or guinea fowl that are kept for production purposes, only by surgical means or thermo-cauterisation, may only be performed until the age of 10 days for geese, ducks and swans and until the age of 72 hours for the other species.
Bulgaria	Allowed	Allowed	Allowed	Forbidden
Croatia	Allowed, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 2. Item 1. And 3., par 3.	Forbidden, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 1.	Forbidden, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 1.	Forbidden, by Animal Protection Act, OG, 135/06 and 37/13.- Article 8. Paragraph 1.
Cyprus	Allowed	Allowed	Allowed	Forbidden
Czech Republic	Allowed	Allowed	Allowed	Forbidden
Denmark	Allowed, but the Danish egg industry has decided on a voluntary ban on beak trimming of laying hens.	Allowed, but only for welfare reasons within 72 hours of hatching, and only removal of the first phalanx of the toe directed backwards of cocks.	Allowed, only for welfare reasons within 72 hours of hatching.	Forbidden, regarded as a violation of the general principles in the Act on the protection of animals

Procedure	Beak trimming	De-toeing	Dubbing	Pinioning
Estonia	Allowed	Allowed	Allowed	Forbidden
Finland	Forbidden (not listed in Section 23 of Animal Welfare Decree).	Allowed	Forbidden, not listed in Section 23 of Animal Welfare Decree	Forbidden
France	Allowed	Allowed	Allowed	Forbidden
Germany	Allowed if competent authority approve because it is necessary to protect the animal from harm.	Allowed	Forbidden	Forbidden
Greece	Allowed	Allowed	Allowed	Forbidden
Hungary	Allowed, according to Annex 6 to Decree 32/1999 (III. 31.)	Allowed, according to Annex 6 to Decree 32/1999 (III. 31.)	Forbidden	Allowed: cropping of the wings when day old), according to Annex 6 to Decree 32/1999 (III. 31.)
Ireland	Allowed	Allowed	Allowed	Allowed
Italy	Allowed	Allowed	Allowed	Forbidden
Latvia	Allowed	Allowed	Allowed	Forbidden
Lithuania	Allowed	Allowed	Forbidden	Forbidden
Luxembourg	Allowed	Allowed	Allowed	Forbidden
Malta	Allowed	Allowed	Allowed	Forbidden
Netherlands	Allowed (via infrared-method) for laying hens and turkeys. Beak trimming of ducks is not allowed in NL.	Allowed for the toe directed backwards of male (grand) parent stock for broilers within 2nd day of life.	Allowed, but only for white feathered male (grand) parent stock for layers within 2nd day of life. Forbidden: dubbing of brown feathered cockerel layer breeders and brown feathered cockerels in the vaccine sector.	Forbidden
Poland	Allowed	Allowed	Allowed	Forbidden
Portugal	Allowed	Allowed	Allowed	Forbidden
Romania	Allowed	Allowed	Allowed	Forbidden
Slovakia	Allowed	Allowed	Allowed	Forbidden
Slovenia	Allowed	Allowed	Allowed	Forbidden
Spain	Allowed	Allowed	Allowed	Forbidden
Sweden	Forbidden	Allowed by (Art 21 2): in the case of male breeding birds, the removal, within the first 24 hours of life, of the first phalanx of the toe directed backwards and that of the inside toe	Forbidden	Forbidden in general but with an exception for birds kept in zoological gardens.
UK	Allowed. Under certain conditions – carried out by trained persons using Infra Red Technique on birds which are less than 10 days old in order to prevent feather pecking and cannibalism.	Allowed. May not be carried out on a bird that is aged 3 days or over, unless a veterinary surgeon considers it is necessary. Anaesthetic must be administered if the bird is aged 3 days or over. Northern Ireland: Allowed (not on birds aged over 72 hours)	Allowed, see also for de-toeing. / Northern Ireland: Allowed (not on birds aged over 72 hours).	Forbidden for farmed birds and an anaesthetic must be used where the bird is aged 10 days or over.

*No replies to our requests for information were received from CY, CZ, LU, MT, SI and RO. The data presented is our interpretation, and should be treated with caution.

7.3 Non-legislative initiatives

A total of 19 examples of initiatives were found and investigated. Three of those were organic labels. They are all described in Table 7.2 below.

Only a few countries involved

The Quality assurance schemes we found originate from only 6 European member states: AT, DE, FR, NL, SE and UK. The majority refer to beak trimming, but the other mutilations are also mentioned. We did not identify any schemes outside these countries.

Beak trimming is banned by quality assurance schemes

Beak trimming is banned by all quality assurance schemes investigated, with the notable exception of the lower tiers of the two tiered schemes investigated: Beter Leven (NL) and Whole Foods (UK). These two still allow trimming, albeit with certain provisions related to the methodology applied. The UK based Red Tractor scheme also still allows trimming, but have agreed to aim for a ban. In Germany the government agreed with the industry to ban trimming as soon as possible. In Austria almost no hens are trimmed due to a ban on beak trimming in their AMA Gütesiegel scheme, which cover almost the entire Austrian egg market.

- ➔ It is remarkable that a practice which is allowed throughout the EU, is banned by virtually all quality assurance schemes aiming to improve animal welfare.
- ➔ The fact that lower tiers of important schemes still allow beak trimming suggests that a ban on trimming may have severe consequences for either the welfare of the birds involved or the viability of the scheme, or both.
- ➔ Please also see Paragraph 7.4 for more information.

De-toeing, dubbing and pinioning are banned

Not all schemes which have a beak trimming ban also include information on other mutilations in their on line documentation. Notable in this respect are Krav (SE), Beter Leven (NL), Bioland (DE) and Svenskt Sigill (SE). Those that refer to the other painful practices have all banned them.

- ➔ Did the schemes who only ban beak trimming miss an opportunity to ban other mutilations as well, or is this a deliberate omission in their standards?

Table 7.2.

Examples of quality assurance schemes and other initiatives in EU member states which include a reduction of painful management procedures in poultry.

	Initiative	Category	Initiator	Type of mutilation	cf CoE	cf National	Position
AT	Toni's Freilandeier	Food label	Toni Hubmann	**Beak trimming**	+++	+++	Forbidden
AT	Austrian KAN certificate	B2B market initiative	Four Paws, Wiener Tierschutzverein, Verein gegen Tierfabriken	**Beak trimming**	+++	+++	Forbidden
DE	Tierschutzgeprüft	Food label	K.A.T. + Vier Pfoten (Friki Project, Almo-Project)	**Beak trimming**	+++	+++	Forbidden
DE	"Ungekürzter Schnabel"	Animal Welfare Plan Lower Saxony	Science + German policy	**Beak trimming**	+++	+++	Forbidden
DE	"Was steht auf dem Ei?"	Food label	K.A.T +Aldi, REWE, EDEKA und Lidl	**Beak trimming**	+++	+++	Forbidden
DE	BIOLAND	Food label	DE Organic Standards	**Beak trimming**	+++	+++	Forbidden
DE	New ways to improve animal welfare	Government + Industry	Poultry Industry & Federal Ministry BMEL	**Beak trimming**	+	+	German poultry industry and BMEL agreement that beak-trimming in laying hens should be phased out as soon as possible.
DE	Neuland	Food label	3 German NGOs	**Beak trimming**	+++	+++	Forbidden
DE	PFEIL	Pilot project	Lower Saxony Ministry for Agriculture and Consumer Protection	**Beak trimming**	+++	+++	Forbidden, end of 2016
NL	Rondeel	Food label	Vencomatic and other chain partners	**Beak trimming**	+++	+++	Forbidden
NL	Beter leven: 3 stars	Food label	Dutch animal protection society	**Beak trimming**	+++	+++	Forbidden
SE	KRAV	Food label	Swedish Organic Standards	**Beak trimming**	+++	=	Forbidden
SE	Svenskt Sigill	Food label	Swedish industry	**Beak trimming**	+++	=	Forbidden
UK	Red Tractor Assured Food Standards	Food label	UK farm & food industry	**Beak trimming**	+	+	Aiming to forbid it
UK	RSPCA Assured	Food label	UK animal protection society	**Beak trimming**	+++	+++	Forbidden
UK	Soil association	Food label	UK Organic Standards	**Beak trimming**	+++	+++	Forbidden
UK	Whole Foods 1-3	Food label	Global not-for-profit Partnership	**Beak trimming**	+	+	Layers: Beak trimming permitted only if performed at hatchery by infrared system. No re-trimming permitted. Broilers: forbidden
UK	Whole foods 4-5+	Food label	Global not-for-profit Partnership	**Beak trimming**	+++	+++	Forbidden

	Initiative	Category	Initiator	Type of mutilation	cf CoE	cf National	Position
DE	Neuland	Food label	4 German NGOs	**De-toeing**	+++	+++	Forbidden
FR	Label Rouge	Food label	French farmers	**De-toeing**	+++	+++	Forbidden
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**De-toeing**	+++	+++	Forbidden
UK	RSPCA Assured	Food label	UK animal protection society	**De-toeing**	+++	+++	Forbidden
UK	Soil association	Food label	UK Organic Standards	**De-toeing**	+++	+++	Forbidden
UK	Whole Foods 1-5+	Food label	Global not-for-profit Partnership	**De-toeing**	+++	+++	Forbidden
DE	Neuland	Food label	5 German NGOs	**Dubbing**	+++	=	Forbidden
FR	Label Rouge	Food label	French farmers	**Dubbing**	+++	+++	Forbidden
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Dubbing**	+++	+++	Forbidden
UK	RSPCA Assured	Food label	UK animal protection society	**Dubbing**	+++	+++	Forbidden
UK	Soil association	Food label	UK Organic Standards	**Dubbing**	+++	+++	Forbidden
UK	Whole Foods 1-5+	Food label	Global not-for-profit Partnership	**Dubbing**	+++	+++	Forbidden
DE	Neuland	Food label	6 German NGOs	**Pinioning**	=	=	Forbidden
FR	Label Rouge	Food label	French farmers	**Pinioning**	=	=	Forbidden
UK	Red Tractor Assured Food Standards	Food label	UK farm &food industry	**Pinioning**	=	=	Forbidden
UK	RSPCA Assured	Food label	UK animal protection society	**Pinioning**	=	=	Forbidden
UK	Soil association	Food label	UK Organic Standards	**Pinioning**	=	=	Forbidden
UK	Whole Foods 1-5+	Food label	Global not-for-profit Partnership	**Pinioning**	=	=	Forbidden

7.4 Focus mutilation: beak trimming

7.4.1 Prevalence of the practice

The commercial egg production industry in Europe consists of approximately 363 million laying hens (Eurostat, 2011). In the Dutch poultry industry approximately 45 million laying hens are kept on average, with a total amount of 10 billion eggs per year. In domestic laying housing systems and especially in loose housing systems, feather pecking is known as a multifactorial issue leading to severe welfare- and health problems (Keeling et al., 2004). Feather pecking can lead to feather damage and feather loss. It causes bald patches that may attract tissue pecking, with wounding of the victim and cannibalism as a result.

Feather pecking is present in all housing systems, from conventional and furnished cages, to barn and free range systems. Nicol et al. (2013) provide an overview of the prevalence of the problem. They cite a study in the United Kingdom which suggests that 68.5% of laying hen flocks at 25 weeks of age and 85.6% of laying hen flocks at 40 weeks of age showed feather pecking behaviour (Lambton et al., 2010). In another UK study, 47% of free-range farmers said feather pecking was a normal occurrence on their farm, with 57% noting it in their last flock (Green et al., 2000). Huber-Eicher (1999) found that a third of Swiss free-range farmers found feather pecking to be a sufficiently serious problem to take action. Gunnarsson et al. (1999) assessed 59 flocks on 21 farms in Sweden and reported a median 62% of birds within a flock with plumage damage on their backs. A Dutch study by Bestman and Wagenaar (2003) investigated 63 flocks on 26 farms, and found little or no plumage damage at 50 weeks in 29% of non-trimmed organic flocks, moderate damage in 19%, and severe damage in 52% of flocks. It can be concluded that feather pecking is a widespread problem.

Feather pecking leads to economic losses to the farmer and severe welfare issues for the animals. The reduced plumage cover linked to pecking is associated with lower food conversion ratio or feed efficiency, as bald chickens require up to 40% more feed to maintain body temperature (Blokhuis et al., 2007). Feather pecking is also associated with significantly increased mortality. In non-cage systems mortality rates of over 15 or even 20% have been found (Blokhuis et al., 2007; Rodenburg et al., 2012). There is also an association between feather pecking and an increased risk of diseases such as egg peritonitis and infectious bronchitis (Green et al., 2000).

To reduce the occurrence of feather pecking behaviour and cannibalism, beak trimming is implemented as a common procedure in the poultry industry (e.g. Cheng, 2010). There are no exact figures on the prevalence of trimming, but it can be assumed that in Europe all laying hens are trimmed, with the exception of those kept on organic farms or the few countries were the practice has been banned. Niekerk and De Jong (2007) conclude in their study of 9 years ago that were beak trimming is allowed, the practice is applied routinely: "The actual situation in European countries is not much different from what their legislation prescribes".

7.4.2 Mitigating the negative welfare consequences

Conventionally, beak trimming can be performed either by hand with a *hot-blade* during the first 10 days of life. In order to remove a part of the top and bottom of the beak, a guillotine-type blade is heated to at least 750°C to cut and cauterize the beak simultaneously (Dennis and Cheng, 2012). More recently, infra-red (IR) beak treatment has been introduced as an alternative for trimming one day old chicks. Thereby a high intensity infra-red energy source is used to impair the corneum-generating basal tissue of the beak's tip which consequently leads to inhibition of continued germ layer growth within 7–10 days, and the sloughing of the tip in 10 to 21 days after trimming (Marchant-Forde et al., 2008). Research suggests that the IR-method may have several advantages compared to hot-blade trimming by reducing stress, pain and handling failures through automated performance (Dennis and Cheng, 2010), the absence of open wounds and a reduced mortality following trimming

(FAWC 2005). As a result, beak trimming with a hot blade is banned in some EU countries (The Netherlands, UK) and only trimming with infrared is allowed.
Acute and chronic pain (Cheng, 2006) is caused during the procedure of cutting, heating or infrared treatment. Trimming will impair the normal beak function, leading to a reduction of feed intake and body weight several weeks after trimming (Kuenzel, 2007). Therefore alternatives are sought, and in some European countries commercial hens are kept with intact beaks (Finland, Austria, Denmark Sweden). To avoid feather pecking, farmers have adapted their breeding practices and rearing conditions. De Jong et al. (2013) provide an overview of the possible approaches. They confirm that the right conditions during the rearing period is very important to prevent feather pecking in the laying phase. In addition there are several other factors which are associated with a reduced risk: lower stocking density, diets with increased fibre contents, mash instead of pelleted feed, reduced light intensity, presence of good quality substrate, access to attractive outdoor runs and providing environmental enrichment to stimulate foraging and exploration behaviour. De Jong et al. (2013) emphasise that feather pecking is a multifactorial problem, and the interaction between management factors and between management and the genetic background of the bird is important. They also recommend that "In addition, the transfer of knowledge from scientific studies to commercial practice an issue that should receive attention".

7.4.3 Legislative initiatives to reduce beak trimming

As described above, Council Directive 1999/74/EC allows EU member states to authorise beak trimming in the EU of chicks less than 10 days old and intended for laying. A legal ban on beak trimming has been introduced in two member states: Finland and Sweden. Two other countries (The Netherlands and the UK) have indicated that trimming is allowed only through the infra-red technique. Following on from that, the Netherlands has announced to ban beak trimming from 1st September 2018 completely. In the UK, the ban on beak trimming was postponed from 2011 to 2016 (Barclay, 2012), and was recently being advised against by Defra's 'Beak Trimming Action Group' (Defra, 2015) who consider a ban in 2016 still too early. There is no intention to ban beak trimming in France, Spain, Italy, Portugal, Greece or Eastern Europe where hot blade beak trimming is still allowed (Defra, 2015).

7.4.4 Non-legislative initiatives to reduce beak trimming

A total of 17 different non-legislative initiatives which referred to beak trimming were identified. The majority of these examples are related to quality assurance schemes, and mainly come from the UK and Germany, but there are some exceptions. Details can be found in Table 7.2 above. The vast majority ban the practice: 16 out of the 18 schemes investigated forbid the trimming of beaks. There are also some national and regional initiatives. Denmark extended its voluntary industry-led ban on beak trimming caged hens to barn and free range birds in July 2014 (Defra, 2015). In Germany, the industry of certain federal states has signed a 'voluntary binding agreement' with the Government to stop beak trimming from 1st August 2016. The egg producers involved will receive a premium of €1.70 per bird if they do not beak trim. At a national level, the German ministry (Bundesministerium für Ernährung und Landwirtschaft -BMEL) and the poultry sector signed an agreement in July 2015 to ban beak trimming as soon as possible. The agreement states: "As of 1 January 2017, the norm in Germany will be to abstain from housing in beak-trimmed pullets in establishments keeping laying hens. This means that, as from 1 August 2016 onwards, hatcheries will discontinue beak-trimming in chicks intended for laying hen husbandry in Germany" (Federal Ministry of Food and Agriculture, 2015). It appears that there is sufficient believe in the industry that producing eggs can be done with hens that have intact beaks.

Sometimes a new approach requires serious investments and innovative thinking. A good example of a successfully introduced market approach is the Dutch Rondeel initiative (http://www.rondeeleieren.nl/) . After many years of research, involving different chain partners, a husbandry and marketing system was developed and built to house hens with intact beaks by Vencomatic. The eggs are sold nationally through Albert Heijn, a large retailer. Rondeel eggs are sold with three 'Beter Leven' stars, which is the highest tier of the Better Life hallmark of the Dutch 'Dierenbescherming' (society for the protection of animals). Currently 3 Rondeel farms plus a mini-farm (in Amsterdam) are operational, and in January 2016 a fourth commercial farm has been opened.

Another remarkable initiative is that of the Austrian egg producers, initiated by the non-legislative Kontrollstelle für Artgemässe Nutztierhaltung (KAN). This Animal Welfare Inspection Body was founded in 1995 by three animal right groups (Four Paws, Wiener Tierschutzverein, Verein gegen Tierfabriken) and the European Egg Consortium (ECC). They initiated the animal welfare label 'Tierschutz geprüft'. Crucial in the development of the Austrian scheme was the subsequent involvement of the German certification body Kontrollierte alternative Tierhaltung (KAT) to set up a slightly less strict second level (below Tierschutz geprüft) without setting up a second certification body. This also allowed access to the German market. Austrian supermarkets then signed up to KAN certification, so that the vast majority of the eggs could be sold under the KAN certificate. To win over the farmers to produce eggs without beak trimming, a consultation and mediation procedure was started with different stakeholders including the farmers, NGO's, packing companies and KAT. Guidelines for best practices were established, and awareness raised among farmers regarding the prevention of feather pecking (Fromwald, 2010). A dedicated task force then introduced a program for stepwise phasing out of beak trimming (50% of flocks trimmed in 2002, 30% in 2003 and 5% in 2004). Farmers were motivated to make the transition though benefit such as higher prices for higher egg-weights, resulting from better feed conversions (Austrian farmers receive payment on the weight of the egg, rather than the number of eggs). They received practical support from a team of advisors on areas related to suitable bird strains, appropriate stocking densities, rearing systems, high protein diets (especially in the early stages of lay),a proper health plan, good climate management and high levels of stockmanship and management including record keeping. They also agreed that those who continued to beak trim in the first years after the agreement was signed would pay an additional certification fee of 14.5 eurocents per hen in 2002, increasing to 36.3 eurocents in 2004. The penalty allowed a fund to be created which provided an insurance scheme to compensate for the loss of birds through cannibalism at farms with birds with intact beaks. The fund collected and redistributed approximately 85,000 euros (Fromwald, 2010). Niebuhr (2013) estimates that the combination of measures resulted in a decrease of cannibalism from 8-9% in 2000 to 1-2% in 2012. Austria is not free of feather pecking, but the severity is considerably reduced (Fromwald, 2010).

The UK Beak Trimming Action Group wrote in their report to DEFRA (BTAG, 2015) that the successful Austrian approach may be difficult to translate to the majority of UK flocks. They consider that UK flock sizes are larger, housed in free range systems and that there is consumer demand for larger eggs and brown eggs. BTAG (2015) also points out that although cannibalism appears to have been stopped, the Austrians have not fully resolved the injurious pecking which can cause significant feather loss.

7.4.5 Strengths and weaknesses of initiatives to reduce beak trimming

Table 7.3 is based on the examples found and telephone discussions with the representatives of non-legislative initiatives aiming to reduce dehorning and disbudding. It summarises the status, strengths and weaknesses of the main routes identified to reduce the mutilation, and proposes a conclusion regarding each of them.

Table 7.3.

Comparative analysis of different initiatives to reduce beak trimming in Europe

Reduce beak trimming through	Status	Weaknesses of this type of initiative	Strengths of this type of initiative	Conclusion
EU Legislation	Directive 1999/74/EC allows beak trimming	Difficult to reach consensus between all MS, farmer becomes 'problem owner' without solutions	Clarity and uniformity, level playing field across Europe	Low feasibility to ban trimming
CoE recommendations	Recommendations since 1995 (no ban)	Consensus result of negotiations (thus conservative)	Applicable across Europe	Low feasibility to ban trimming
National legislation	Present (2 MS have banned trimming, and others are considering or have decided to do this)	'Uneven playing field', farmer becomes 'problem owner' without solutions	Tailored to local needs and opportunities	Likely to be used by increasing number of MS, worth investing in
Quality assurance	Present in small number of MS (but trimming banned throughout)	Requires 'safety net' for farmers taking part, dependant on market forces,	Tailored solutions, financial incentive for farmers, best practices can facilitate compliance	Several success stories, worth developing further

8 Future perspectives on reducing mutilations

The main aim of this report is to support a reduction of the occurrence of mutilations applied to cattle, pigs, sheep, horses and poultry, by suggesting critical success factors derived from initiatives currently applied in European livestock production.

In the previous chapters some indications can be found of progress made in recent years at a European level (e.g. a reduction in surgical castration of pigs), but the majority of steps forward appear to happen very gradually and at a lower level (e.g. national or regional). This applies to legislative as well as non-legislative initiatives. The impact of the various initiatives was not assessed in this study, and it was therefore not possible to do a proper quantitative assessment of factors contributing to a reduction in mutilations. However, the qualitative analyses of the data collected and the discussions with stakeholders and representatives of quality assurance schemes make it possible to hypothesise several critical success factors.

A sense of urgency is needed to get the ball rolling

There must be a desire to make a change from those who can influence the decision to stop. For several mutilations and domains there does not seem to be a 'sense of urgency' to stop. Examples are cattle welfare legislation (there is no legislation at EU level and the CoE recommendations date from 1988), and the absence of a ban on several practices in sheep marketing initiatives. The desire to change can be influenced, and public opinion can be a forceful motivator (both with respect to legislative as well as non-legislative initiatives). It is not clear from our data why some mutilations are perceived as more urgent than others by legislators and developers of non-legislative initiatives. A perceived 'green image' of some husbandry sectors (cattle, sheep, goats) may have something to do with it, or the perception that some mutilations are not very prevalent (e.g. freeze branding). A sense of urgency can be influenced or created. NGOs can play a leading role in this. Their actions may persuade policy makers that change is needed (exemplified by e.g. legislation on several mutilations in NW European countries), or bring chain partners together to create non legislative initiatives that can be followed on a voluntary basis (e.g. the Brussels declaration of 2011 to ban surgical castration in pigs).

Without enforcement a high level of compliance will not be maintained

There are several documents which suggest that proper enforcement is crucial to the success of legislative initiatives (e.g. EFSA, 2007a; Ingebleek et al., 2012). The same applies to quality assurance schemes in which the rules are not complied with: misleading claims will sooner or later lead to the scheme being exposed and breaking down (c.f. Anonymous, 2012). The present report did not investigate the level in which legislation or quality assurance requirements are enforced. However, the hypothesis that compliance and enforcement are crucial seems valid.

Technical solutions are needed for technical problems

Simply banning a mutilation will not provide a guarantee that welfare will be improved. Several mutilations are applied to prevent worse from happening: well-known examples are tail docking and beak trimming to prevent tail biting and feather pecking, respectively. Science and commercial practice should work together to provide approaches to make a change possible. One approach to improving welfare is to reduce the impact of the mutilation itself, e.g. by using appropriate pain relief. A good example of this are the efforts made to develop practical ways of castrating piglets on farm with the use of anaesthesia (Backus, 2014) which are suggested to be the stepping stone towards a complete ban on castration. Secondly, technical solutions to provide alternatives to mutilation will also continue to be developed by the farming industry and science: the breeding of polled cattle (to avoid disbudding) is a promising example. Finally, ways to avoid the negative consequences of stopping the

procedure also need to be investigated by scientists, in close collaboration with the farming industry. An example of this approach is the search for technologies that will stop (or at least reduce) fly strike in sheep with intact tails.

A 'Safety net' is needed to avoid disasters if things go wrong

Farmers cannot afford to try a new approach if the risk of failure and associated costs is too high, especially if the mutilation takes place early in life to stop problems later on (e.g. tail biting). A safety net can consist of a technical solution (dealing with tail biters as well as injured pigs), or financial compensation. The need for a technical safety net is illustrated by the Dutch 'Krulstaart' project. The pig farmers involved in the project would only take part if they were offered tools to tackle a tail biting problem, should it occur after they stopped docking. The consortium responded to this challenge by designating a considerable amount of effort to the development of curative solutions. An example of a financial safety net is the Austrian feather pecking fund described in this report. In this initiative, the redistribution of money ('taxation' of farmers that perform poorly and reward for those that perform well) proved to be a powerful mechanism to convince farmers to take part, and support a considerable change in the Austrian poultry production chain.

Long term investments require long term commitments by other parties

To stop mutilations, farmers may need to change housing and management practices on their farms. This may require serious investments, for which trust and a long term commitment by partners down the chain is essential. The conversion periods allowed for conventional farms to fully comply with organic rules illustrate this. An example from the present report to support this hypothesis is the Rondeel laying hen farm in The Netherlands. The technical specifications describing a farm which would allow hens to be kept with intact beaks were developed several years before the first farm was actually build (Groot Koerkamp and Bos, 2008). It took considerable time and effort, as well as the commitment from a large supermarket chain to sell the eggs at a premium price. Short term finances e.g. subsidies, may only resolve short term challenges (e.g. the costs of conversion itself).

Legislation is not always necessary to achieve a ban

Maintaining a level playing field is often said to be essential for the farming industry, if they want to stay competitive. Harmonised EU wide legislation is therefore often called for by those who fear economic disadvantages when societal demands for a change in farming become louder. However, several examples in this report suggest that legislation is not always essential to ban a mutilation: in Denmark and Austria beak trimming has almost disappeared, even though it is still legally allowed. The incidence of surgical castration of piglets in The Netherlands was strongly reduced in recent years through voluntary agreements of the sector with NGO's and retailers. All of these examples have one thing in common: in addition to benefits through better feed conversion of the intact males, they all rely on support from the market to be sustainable. It may not be necessary to ban mutilations by law, as long as there is a demand for the product through the market chain.

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Annex 1 Legislation and CoE recommendations regarding 5 Focus mutilations

1. Dehorning and disbudding of cattle

Council of Europe recommendations Concerning Cattle, adopted by the Standing Committee of the European Convention for the Protection of Animals kept for Farming Purposes (21 October 1988).

1. Procedures resulting in the loss of a significant amount of tissue, or the modification of bone structure of cattle shall be forbidden, and in particular:
b. dehorning by other means than the surgical removal of the horns;

2. Exceptions to the prohibitions under paragraph 1 may be made:
b. for the following procedures which can be performed only in the interest of the animals or when necessary for the protection of people in close contact with the animals, and on the conditions set out in paragraphs 3 and/or 4 hereafter;
i. destruction or removal of the horn producing area at an early stage (disbudding) to avoid dehorning;
ii. dehorning, if performed by surgical removal of the horns;

3. Procedures in which the animal will or is likely to experience considerable pain shall be carried out under local or general anaesthesia by a veterinary surgeon or any other person qualified in accordance with domestic legislation. These procedures include (...), dehorning and disbudding by surgical means or by heat cauterisation on animals over four weeks of age (...).

4. Procedures for which no anaesthesia is required shall be performed on animals in a way so as to avoid unnecessary or prolonged pain or distress. Such procedures may be carried out by a skilled operator, and include, on the conditions set out in paragraph 2 above:
a. destruction or removal of the horn producing area of animals under four weeks of age:
i. by chemical cauterisation;
ii. by heat cauterisation on the condition that it is done with an instrument which produces sufficient heat for at least ten seconds;

2. Tail docking of sheep

Council of Europe recommendations concerning sheep, adopted on 6 November 1992 by the Standing Committee of the European Convention for the Protection of Animals kept for Farming Purposes.

Article 30
1. Procedures resulting in the loss of a significant amount of tissue or the modification of bone structure, or which cause a significant amount of pain or distress shall be forbidden (...)
2. Exceptions to the prohibitions under paragraph 1 may be made: (...);
(b) for the following procedures which can be performed on the conditions set out in the paragraphs hereafter:
(i) docking of tails by surgical methods or with haemostatic tongs, so long as sufficient tail is retained to cover the anus in male, and the anus and vulva in female sheep; (...)

(c) where allowed under national legislation for castration and tail-docking by the use of rubber rings, notching and punching of ears.
3. Tail-docking and castration, in particular by the use of rubber rings, should be avoided. If these procedures have to be carried out, only surgical methods preceded by anaesthesia or haemostatic tongs should be used. (...)
4. Contracting Parties should encourage research into the problems associated with tail docking and castration.

3. Tail docking of pigs

COUNCIL DIRECTIVE of 19 November 1991 laying down minimum standards for the protection of pigs (91/630/EEC)

Annex Chapter II, part III 4. Neither tail docking nor tooth clipping must be carried out routinely but only when there is evidence , on the farm , that injuries to sows' teats or to other pigs' ears or tails have occurred as a result of not carrying out these procedures.

4. Castration of pigs

COUNCIL DIRECTIVE of 19 November 1991 laying down minimum standards for the protection of pigs (91/630/EEC)

Annex Chapter II, part III 3 . If practised, the castration of male pigs aged over four weeks may be carried out only under anaesthetic by a veterinarian or a person qualified in accordance with national legislation.

5. Beak trimming of laying hens

COUNCIL DIRECTIVE 1999/74/EC of 19 July 1999 laying down minimum standards for the protection of laying hens

Annex, point 8. Without prejudice to the provisions of point 19 of the Annex to Directive 98/58/EC, all mutilation shall be prohibited. In order to prevent feather pecking and cannibalism, however, the Member States may authorise beak trimming provided it is carried out by qualified staff on chickens that are less than 10 days old and intended for laying.

To explore the potential of nature to improve the quality of life

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