Evaluation of survey on male piglet castration

Between September and November 2016 the Federal Food Safety and Veterinary Office FSVO has made a survey on male piglet castration among members of the European Forum for Animal Welfare Councils (EuroFAWC).

Since 1 January 2009, the castration of male piglets in Switzerland can only be carried out under anaesthesia. Swiss pig breeders have at their disposal today three practicable methods for preventing boar taint in pork: surgical castration under general anaesthesia, vaccination against boar taint and boar fattening. All three methods meet the requirements of the law and economic viability, while ensuring both the high quality and consumer acceptance of the meat.

Of these three methods, surgical castration under general anaesthesia has become established in Switzerland with the support of the industry. Around 98% of male piglets today are castrated using the technically sophisticated method of anaesthesia by means of isoflurane together with a suitable analgesic.

After more than seven years’ experience, it is appropriate to evaluate surgical castration under general anaesthesia and to compare it with the well-known alternative methods already established abroad. This is especially indicated because not only does the procedure cause considerable stress to the piglets, but at the same time there are gentler alternative methods available which are unobjectionable for consumers.

The following is an explanation of the methods used in various other European countries and the reasons why they are used.

Pigs are not castrated in Ireland and the United Kingdom, because they are already slaughtered at a low weight of 90 kg, thereby eliminating the risk of boar taint. In the United Kingdom, castration is not illegal, but farm assurance schemes do not allow it under their rules. Since most pigs are reared and slaughtered under such schemes, castration is hardly ever carried out. But if surgical castration is used, then it has to be carried out in the first week after the birth of the piglets. Immunocastration had not been adopted as it is not accepted by many assurance schemes and hence retailers.

In the Netherlands piglet castration is regulated by law; policy focuses on entire male pigs and a ban on castration in 2018 (Project "Boars 2018"). An increasing number of Dutch pig farmers have stopped castrating their male piglets. The percentage of entire male pigs increased from 5% in 2009, 45% in 2011, to approximately 65% by early 2014. All the meat from pigs in Dutch stores are from non castrated pigs. Anaesthesia (CO2) and analgesia is obliged for castration of piglets older than 7 days. Castration without anaesthesia is performed, exact data not available. In general good experiences with entire male pigs. A recent study showed that breeding was an effective preventive measure to reduce boar taint and that appropriate management, feeding and housing conditions reduced the level of mounting and aggressive behaviour.

In Belgium (Flanders) the export market is bigger and more important than the domestic market. Meat destined for export comes from pigs that are castrated without anaesthesia. Analgesics are used in castration. Meat for sale on the domestic market is mainly produced using boar fattening and immunocastration. Good experiences have been reported with both methods. There is even a retailer who sells only meat from immunocastrated pigs.
In **Denmark** the law allows pigs to be castrated without anaesthesia, as long as they are given pain relief. This is the method most frequently used. At the beginning of 2014, Danish players involved in pork production decided to improve animal welfare. One objective is to make sure no more pigs are castrated without anaesthesia as from 2018. For Denmark the export market is likewise very important. The Danish industry is sceptical that boar fattening will be accepted outside the EU. Immunocastration is also not regarded as a possible solution.

Almost all male piglets in **Finland** are castrated without anaesthesia but with analgesia.

Surgical castration without anaesthesia has been banned in **Sweden** since the beginning of 2016. Most male piglets in Sweden are surgically castrated. This procedure, incl. anaesthesia, is carried out by lay people with appropriate education. It is assumed this training means that the anaesthesia is performed correctly in most cases. Only about 1% of pig farmers use boar fattening, because the aggressive behaviour of male pigs has a negative impact on animal welfare and it requires a lot of skill in handling them. Immunocastration is considered highly beneficial to animal welfare compared to all other methods. The efficacy of vaccination can be easily monitored by observing behaviour and scrotum size. About 5% of pig farmers use this method.

In **Norway** 93% of male piglets are surgically castrated. The procedure involves mandatory administration of local anaesthesia and also long acting analgesia by injection. From an animal welfare perspective, immunocastration would be the best method, but only about 6% of pig farmers use it. The problem is that the effect of surgical castration is easier to check than that of immunocastration. It is also difficult to establish a rapid, reliable and specific test to confirm the effect of immunocastration and the absence of boar taint.

**Austrian** law stipulates that male piglets less than seven days old may be castrated without anaesthesia. This method is used almost everywhere in Austria, because anaesthesia would have to be carried out by the veterinarian, which would bring added costs. There is a voluntary agreement in the industry on the use of analgesics, and a change in the law is currently under debate. Boar fattening and immunocastration are hardly ever used. In the case of boar fattening, husbandry requirements are too strict and the odour issue poses a legal problem. Isoflurane is approved, but vaccination may only be carried out by a veterinarian, which proves to be too high an obstacle.

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