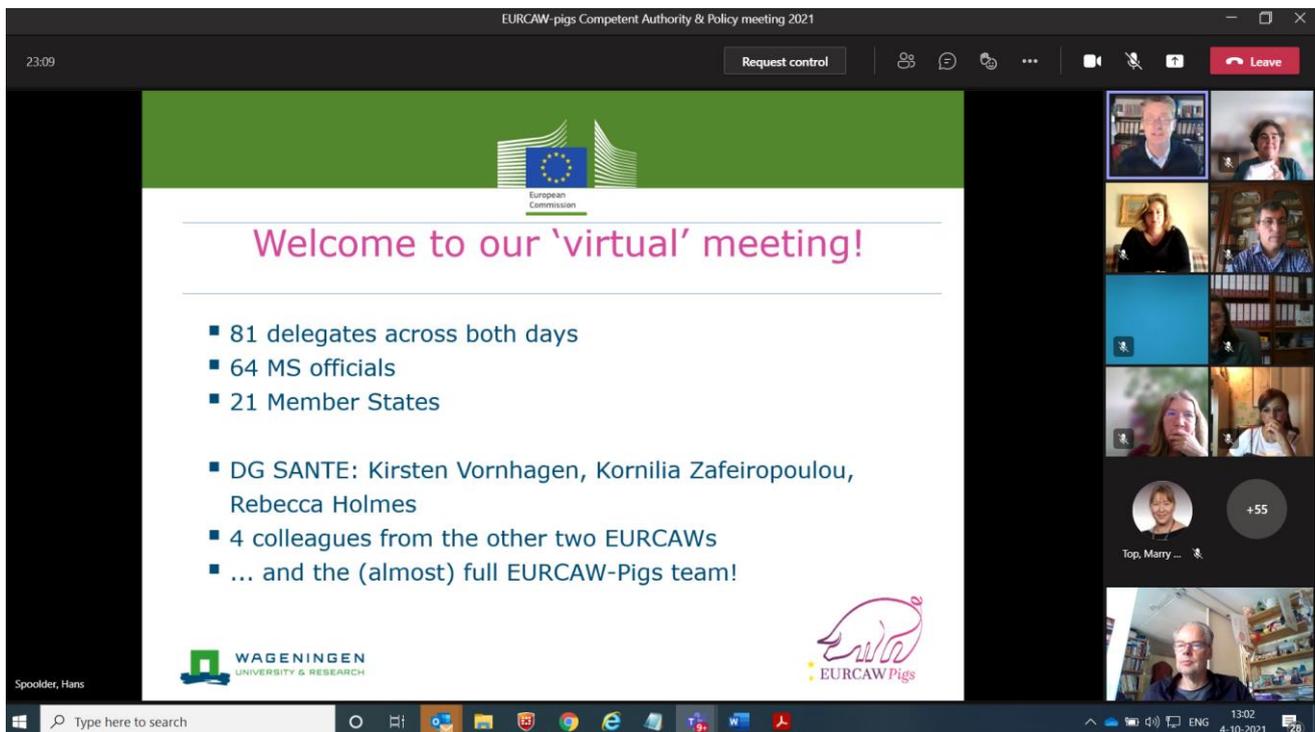


*The EU Reference Centre of Animal Welfare (EURCAW) was established in 2018 by the DG SANTE to support EU Member States on issues related to the pig welfare legislation. As part of its activities, EURCAW-Pigs organises meetings with inspectors and other officials from EU Member States (MS). The meetings are an opportunity for officials to ask technical questions related to e.g. Directives 98/58/EC and 2008/120/EC (on farm), Regulation (EC) No 1/2005 (transport), and Regulation (EC) No 1099/2009 (slaughter).*

Previous meetings were held with relatively small groups of officials and experts from the Reference Centre, to give maximal attention to individual queries. They were held in different regions of Europe. In the Reference Centre's Work Programme for 2021 – 2022, two larger annual meetings are included to discuss obstacles and answer questions that inspectors and other officials from EU MS may encounter in their daily work. The current meeting is the first annual meeting. The programme for these meetings focus on the topics that the officials want to discuss, and there will be ample opportunity to engage in dialogue with colleagues from other Member States as well as pig welfare scientists.

The meeting was organized online (MS Teams). In total, 81 delegates from 21 MS participated. Sixty-four of them were MS officials. Furthermore, the meeting was attended by 3 delegates from DG SANTE, 4 staff members of the other 2 EU Reference Centres, and almost the full team of EURCAW-Pigs. The meeting started at 13:00 hours on Monday October 4, and was closed at 12:15 hours on October 5.



EURCAW-pigs Competent Authority & Policy meeting 2021

23:09

Request control

European Commission

## Welcome to our 'virtual' meeting!

- 81 delegates across both days
- 64 MS officials
- 21 Member States
- DG SANTE: Kirsten Vornhagen, Kornilia Zafeiropoulou, Rebecca Holmes
- 4 colleagues from the other two EURCAWs
- ... and the (almost) full EURCAW-Pigs team!

WAGENINGEN UNIVERSITY & RESEARCH

EURCAW Pigs

Spoolder, Hans

Top, Marry ...

13:02  
4-10-2021

## Welcome & meeting aims

The participants were [welcomed](#) by Hans Spoolder, director and coordinator of EURCAW-Pigs. He chaired the meeting and introduced the aims and way of working of EURCAW-Pigs, what the Centre achieved in the first 2 years, and how information can be found on EURCAW-Pigs website [www.eurcaw-pigs.eu](http://www.eurcaw-pigs.eu). He also gave the word to Kirsten Vornhagen of DG SANTE. So far, she was the primary contact person at DG SANTE for the Animal Welfare Reference Centres, but from now on each EU Reference Centre will have one contact person (desk officer) in SANTE.G5. Kornilia Zafeiropoulou will be the contact for for EURCAW-Pigs; Kirsten Vornhagen for EURCAW-Poultry-SFA and Rebecca Holmes for EURCAW-Ruminants&Equines. Kirsten mentioned the Commission's ambitions in the 'Farm to Fork' strategy and the European Citizens' Initiative 'End the Cage Age'. Under the Farm to Fork Strategy, the EU animal welfare legislation is revised to ensure a higher level of animal welfare and align the EU animal welfare legislation with the latest scientific evidence. In its response to the European Citizens' Initiative, the Commission sets out plans for a legislative proposal by 2023 to prohibit cages for a number of farm animals, e.g. sow crates and stalls. Kirsten Vornhagen concluded with wishing the participants a fruitful meeting, being informative and of support in the daily work, and also of use in the discussion on the coming revision.

## Discussion topics

Prior to the meeting, the delegates were asked to choose what topics they want to discuss during the workshops, and from an extensive list 5 topics were selected. The proposers of the selected topics were asked to introduce their topic in a short presentation at the start of the meeting. Following these 'pitches', the topics were further discussed in subgroups: the first round lasted 45 minutes, the second and third round each 30 minutes. For each topic, a different EURCAW-Pigs expert was invited to listen to the concerns, questions, personal experiences, and possible solutions added by the delegates. The expert was asked to understand the problem and solutions offered during the first day, and to prepare for a 'reply' to be presented on the second day.

The topics and experts were:

Topic 1: Transport of pigs - Michael Marahrens, Animal welfare scientist and consultant, Friedrich-Loeffler-Institut (FLI), Germany.

Topic 2: Tail docking: Technical issues - Antonia Patt, animal welfare scientist, Friedrich-Loeffler-Institut (FLI), Germany.

Topic 3: Farrowing house management – Lene Juul Pedersen, Professor in animal welfare and precision livestock farming, Aarhus University, Denmark.

Topic 4: Slaughtering and killing of pigs - Marien Gerrtzen, senior scientist animal welfare, Wageningen Livestock Research, The Netherlands.

Topic 5: Tail docking: Action Plans – Hans Spoolder, senior scientist in applied ethology, Wageningen Livestock Research, The Netherlands.

Day 1 was concluded with two intermezzos provided by EURCAW-Pigs team members. First, Marko Ruis (Wageningen Livestock Research) presented a first idea of an online Community of Practice, to establish

personal contacts, and exchange and share experiences. Jan Tind Sorensen (Aarhus University, Denmark) gave an update on EURCAW-Pigs' training issues and activities.

## Wrap-up five topics

Day 2 continued with the invited experts replying to the 5 topics introduced on the first day. They presented scientific knowledge, practical examples and their own thoughts on the topics. The following points were made or discussed during these feed-back sessions.

### Transport of pigs

The implementation of Reg (EC) 1/2005 on the protection of animals during transport raises many practical questions. Several issues were raised on day 1 and [addressed](#) by Michael Marahrens on day 2. For a review of the topic, see also EURCAW-Pigs [review of climate control and space allowance during transport of pigs](#).

1. *Fitness for transport*. Most MS use official EU Guidelines to assess fitness for Transport and few have national Guidelines. Guidelines are perceived to be helpful, when illustrated. The practical EU guidelines will soon to be used obligatory in one or more MS by competent authority and transporters, assembly centres and keepers. However, some problems regarding enforcement are foreseen. Reg. (EC) No 1/2005, Annex I, says: "No animal shall be transported unless it is fit for the intended journey ..." and "... sick or injured animals may be considered fit for transport if they are: (a) slightly injured or ill and transport would not cause additional suffering ..." In this case, no separation (isolated transport) or marking is requested. But: when animals fall ill or are injured during transport, they shall be separated from the others. And what are the indicators for separation of individual animals during transport? In daily practice, the problem arises that there is no decision on who is responsible: farmers, transporters, assembly centers? Moreover, the provisions and tools to reach ill animals during transport, for care or emergency killing, are very limited. It is also quite usual that there is only retrospective determination of violations.

One solution being discussed during the meeting is giving feed back information from slaughterhouse/ Competent Authorities to farmers, provided that this information is public available. What may help to make data available is to have a link between animal welfare law and meat inspection law. A feedback loop helps to do a [risk assessment](#) in the full chain, with the expectation that most animal welfare problems develop on farm and many problems already exist before transport. Such a feedback system may be organized by the private sector, as part of quality assurance. However, it remains undisputed that in cases of serious violations of animal welfare requirements, the competent authority must intervene and penalize the violators.

2. *How to deal with temperature issues (too hot to drive)?* Requirements of Reg (EC) No 1/2005 on thermal environment and monitoring only related to long transport: "3.1 Ventilation systems (...) are capable of maintaining a range of temperatures from 5 °C to 30 °C within the means of transport, for all animals, with a +/- 5 °C tolerance, depending on the outside temperature." No guidelines on this topic exist on EU level. However, national rules may apply at MS level. In a MS instructions are in place how to reduce stocking density (interacts with thermal conditions) in case of high temperatures. In the same MS, animal transports with > 35 °C outside temperatures are not allowed. In a MS, slaughter animal transports are limited to 4.5 hours when exceeding 30 °C outside temperature (lasting from 2022 on). Also, the

category of pig being transported should be taken into account. A recent factsheet on transport of pigs by the European Commission (Anon., 2019) lists the following thermoneutral zones:

- Piglets <15 kg: 20-35 °C;
- Growing/finishing pigs 16-110 kg: 15-30 °C;
- Finishing pigs 111- 160 kg: 10-28 °C.

These temperatures should be maintained inside the trailer, which is only possible in transport vehicles with active air conditioning. Both within and between tiers of a vehicle a considerable variation in ambient temperatures may exist.

3. *Issues related to stocking density on the vehicle.* Reg (EC) No 1/2005 requires (Annex 1): "All pigs must at least be able to lie down and stand up in their natural position. In order to comply with these minimum requirements, the loading density for pigs of around 100 kg should not exceed 235 kg/m<sup>2</sup>. The breed, size and physical condition of the pigs may mean that the minimum required surface area given above has to be increased; a maximum increase of 20% may also be required depending on the meteorological conditions and the journey time." But what about different animal categories and behavioural requirements (i. e. lying behaviour, natural position, moving area to reach drinkers)? Some MS take these into account and have national rules on stocking densities of pigs during transport. The Animal Transport Guides provide a guideline in space allowances: minimum floor area per pig according to maximum live weights. In EURCAW-Pig's review, a table is provided with space requirements for pigs during transport in m<sup>2</sup>/animal depending on the pigs' body weight, lying position, space requirement for drinking and resting.

### Tail docking: Technical issues

Council Directive 98/58/EC concerning the protection of animals kept for farming purposes lays down the basic principle that pigs should be offered an adequate level of welfare. Council Directive 2008/120/EC elaborates on this and sets out specific rules on the protection of pigs. Specific issues with regard to tail biting were raised and discussed by referring to annexes in these directives. Antonia Patt gave her [feedback](#) on day 2:

1. *Dust as a risk factor for tail biting.* Dust levels contribute to air quality and thereby affect in one or another way stress and tail biting levels. Sources of dust are organic enrichment material, bedding, feed, dirt, pigs. Higher dust levels may be caused by inappropriate ventilation. According to Council Directive 98/58/EC, Annex No. 10: "Air circulation, dust levels, temperature, relative air humidity and gas concentrations must be kept within limits which are not harmful to the animals." But what is an acceptable level level of dust in a pig accommodation? Dust levels are often not studied specifically, but part of air quality in general. Parameters such as dust, ammonia, carbon dioxide interact, and an epidemiological study associating air quality with pig health shows that these parameters are positively correlated. A MS has national legislation in place for organic dust: levels should not exceed 10 mg/m<sup>3</sup>. Other MSs do not have legal thresholds. Procedures for inspection vary between MS, esp. duration of exceeded concentrations, when to measure air quality (regularly vs. after indication). It is unusual to specifically measure dust content; the procedure is complicated. You need special filters for collection of dust. In poultry houses a 'dust sheet test' may be used. On pig houses you have to deal with different compartments and pens. Moreover, it is specifically the smaller dust particles that reach the alveoli and make animals ill. Good measures require expensive

devices. All together it was concluded that a good simple method for measuring dust levels does not exist yet, but also that a good guidance for inspectors is that once you find that CO<sub>2</sub> and ammonia levels are okay, it can be expected that dust levels are also within the limits. For assessing climate and air quality in relation to pig welfare and health, EURCAW-Pigs provided a protocol (Question to EURCAW-Pigs '[How do you assess if the climate in the pig barn is 'adequate'](#)?').

2. *Diet or feeding strategies.* The discussion quickly came to the point of access and quality of the feed. Most aggression seems to occur during feeding: 30-50% of tail biting occurs in the vicinity of the feeder. This might reflect stress and frustration associated with feeding competition. Finish farmers ranked enough feeder space to be the most important measure to prevent tail biting. Welfare indicators such as aggression and skin lesions (see indicator factsheet '[Skin lesions](#)') need time for inspection and observations should be performed in a standardized and repeatable way. Body condition (see indicator factsheet '[Body condition](#)') is more a rough measure of aspects of access to feed/competition and/or quality. Differences in body condition/heterogenous weight in pen indicate a problem, but this is 'too late' for prevention. But this might be 'good enough' for inspectors focused on problems rather than prevention. Body condition may also reflect health issues and is therefore not specific for diet or feeding issues.

Council Directive 2008/120/EC states that all pigs must be able to access feed at the same time if fed restrictively on group level. There are many questions on how to do that. Feeding space is regulated in some MS (but different formula). Additionally, number of feeders (drinkers) per pig is regulated in some MS. It would be helpful if specifications of feeding space and animal-feeding place ratio would be harmonized across MS (for drinkers too). For 'Permanent access to water' (resource-based indicator), EURCAW-Pigs also developed an indicator factsheet.

Finally, the problem of mycotoxins was raised, which is also an issue in some MSs. Mycotoxins are hypothesized to be associated to tail biting. The importance of feed storage is emphasized, and it is advised to keep feed samples to analyse if a problem appears. One MS sponsors 'mycotoxin blocker' in feed.

3. *Ear biting.* With regard to Council Directive 2008/120/EC, Annex I, chapter I, No. 8 "Neither tail-docking nor reduction of corner teeth must be carried out routinely but only where there is evidence that injuries to sows' teats or to other pigs' ears or tails have occurred." The question is: Is there a link between tail and ear biting? There was not much time left during the discussion for this topic, and few studies focus only on ear biting. However, one study indicates that risk factors for ear and tail biting seem to be similar. One MS starts collecting slaughterhouse data on ear lesions.

### **Farrowing house management**

In Council Directive 2008/120/EC specific requirements are laid down for sows and piglets:

- Accommodation for pigs must be constructed in such a way to allow the animals to rest and get up normally.
- Farrowing pens must have protection systems for piglets.
- Farrowing pens must have an unobstructed area behind the sow.
- Suitable nesting material available, during the week before expected farrowing time.
- Piglets must have sufficient space to be able to be suckled without difficulty.

- A part of the total floor, sufficient to allow the animals to rest together at the same time, must be solid or covered with a mat, or be littered with straw.

At the same time, in response to the European Citizen's Initiative "End the Cage Age" with the farrowing crate being challenged and possibly banned by legislation, farmers start to ask for free housing systems and want to know specific requirements of open farrowing systems. Main points to achieve:

- Free movement of the sow.
- Ethological behaviour (possibility to nest, rooting behaviour).
- Prevention of piglets-crushing.
- More space needed.
- Look at the farrowing pens of organic farms.
- Joint lactation.

The main points that came out of the discussion on day 1 were: What are the main requirements for space? How should the pens be designed? Can joint lactation be used to increase weaning age? How can piglet mortality be reduced? These points were [addressed](#) by Lene Juul Pedersen on day 2:

1. *What are the main requirements for space?* There is various legislation on pen size among MSs. Space is needed for zone division. When pen size <6 m<sup>2</sup>, zone division is not successful. Space for nest building, for sow movements, and for maternal behaviour facilitates natural behaviour and positive feelings, stimulates the farrowing process and maternal hormones, improves appetite and milk production, and increases growth rate of piglets. Moreover, sows and piglets can thermo-regulate by specific behaviours. These are mainly advantages of full loose housing.
2. *How should the pens be designed?* To get the full potentials of free farrowing and lactation, pens must be well designed. Zone division can be facilitated by dividing the pen into nest and dunging/activity area with slatted floor (sows leave nest for dunging behaviour). In the nest area where the sow farrows various high quality nest materials should be used. As sows prefer isolation during farrowing, solid walls in the resting and nesting area are attractive. Thermal comfort for newly born piglets should be high in the designated nest area. The sow may thermoregulate by seeking up cooler slatted floor. For hygiene reasons, the sow should also be able to move away from feed when dunging: the feed trough position therefore guides dunging behaviour.
3. *Can joint lactation be used to increase weaning age?* The standard age of weaning is 3-4 weeks. Later weaning has several benefits for piglets: more mature immunesystem and gastro-intestinal tract, piglets voluntary and gradually start to eat solid feed from 3-4 weeks, increased pre-weaning intake of solid feed, and less risk of weaning stress and weaning diarrhea. Natural weaning is gradual and takes up to 10-14 weeks.

In loose housing with larger pen size and/or joint lactation there is a possibility for sows to avoid piglets by moving away. In the communal feeding area, the pigs' pre-weaning experience is stimulated with solid feed ("learning by observation"). With intermittent suckling from 4th week in group lactation systems sows may move away for e.g. 10 hours daily during six weeks and gradual weaning is stimulated. Benefits seen are less diarrhoea, improved growth, and less abnormal behaviour during entire growing period.

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4. *How can piglet mortality be reduced?* Hypothermia at birth plays a major role for later piglet crushing and death. During early lactation piglets should be attracted to a heated creep area. Radiant heat attracts piglets to use creep area earlier than traditional heat bulbs with light. Further advantages are that radiant heat consumes less energy and provides more even heat over a larger surface. Risk of crushing is also reduced by use of deep straw bedding/strategic straw: it was observed that this results in less hypothermia, reduced carpal lesion, and improved growth. Several participant mentioned that breeding goals must be re-considered: large litter size makes piglets more vulnerable by a large within litter weight variation. A low birth weight leads to a higher risk of hypothermia, crushing and starvation. Also, good maternal behaviour was mentioned, becoming even more important in loose housing.

For more information, Lene Juul Pedersen referred to EURCAW-Pigs' review on "[Farrowing housing and management](#)". There will be an update in Spring 2022, focussing on loose housing. Moreover, a variety of information and resources about any aspect of free farrowing and lactation systems can be found on <https://www.freefarrowing.org/>

### Slaughtering and killing of pigs

Several issues in Reg (EU) 1099/2009 regarding killing at the time of slaughter require a better understanding of techniques to reduce suffering when stunning and killing pigs. In his feedback session, Marien Gerritzen gave a comprehensive overview of the topic. He [replied](#) to the following main topics brought up in the discussions:

1. *CO<sub>2</sub> stunning , issues and alternatives.* In most countries CO<sub>2</sub> stunning is the most important method applied. Benefit over electrical stunning is that for the CO<sub>2</sub> stunning process, pigs are stunned in small groups. In contrast, for electrical stunning pigs are moved from a group into a single line and restrained individually. This handling is very stressful to the animals. Moreover, the failure rate is higher in electrical stunning. Nevertheless, the high CO<sub>2</sub> concentrations used for stunning are highly aversive and not welfare friendly. CO<sub>2</sub> stunning is therefore becoming more and more controversial. To date, there is no commercially available alternative gas mixture for these systems. The use of nitrogen (N<sub>2</sub>) or mixture of N<sub>2</sub> with CO<sub>2</sub> (incl. N<sub>2</sub> filled foam) is investigated (see also Question to EURCAW-Pigs "[What is the current knowledge on nitrogen stunning?](#)"). Results so far indicate that N<sub>2</sub> or N<sub>2</sub>/CO<sub>2</sub> mixtures lead to less aversive responses, longer induction time and fast recovery of consciousness. For alternative gasses like argon or helium there are no serious results published or developed. Lower CO<sub>2</sub> concentrations or two step methods results in longer induction time with aversive reactions and a shorter stun stick interval. From a scientific point of view, electrical stunning is the best alternative for CO<sub>2</sub> stunning. Negative aspects that need to be improved are the pressure on moving animals from lairage to the point of stunning and placement of the electrodes to guarantee effective stunning. There is no practical device that can check unconsciousness. Toolboxes with animal based indicators are provided by [EFSA](#) and in the EURCAW-Pigs' review on "[Pig stunning and bleeding](#)". It was emphasized not to focus on one indicator during inspections.
2. *Methods for the mass depopulation of pigs in case of a disease outbreak.* Available methods include physical and chemical methods, and considerations for each method were given:
  - *Electrical killing:* Passing an electrical current through the brain to induce unconsciousness, followed by passing an electrical current through the heart to induce death.

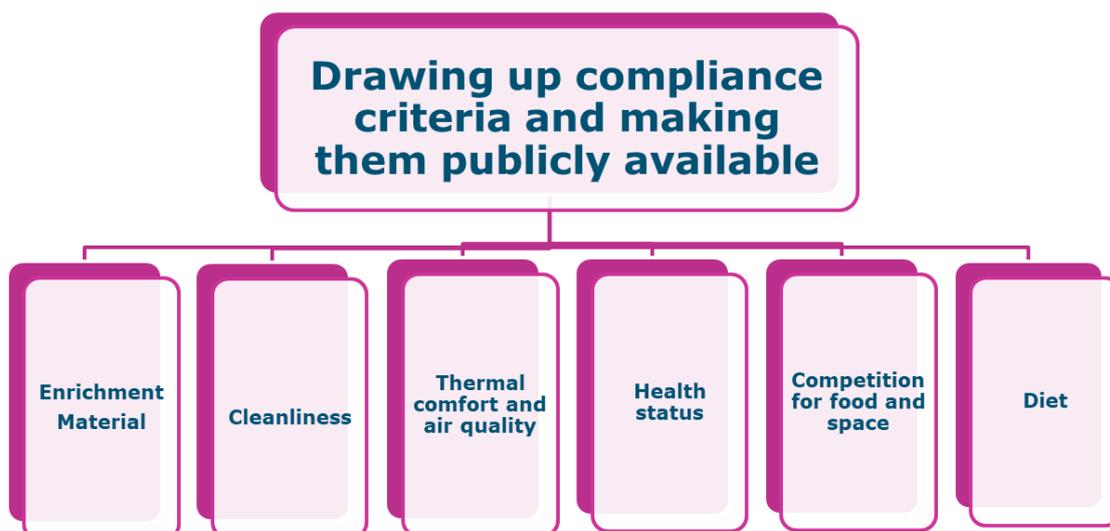
- *Captive bolt*: A penetrating captive bolt is applied to induce immediate unconsciousness by a concussive blow to the head and penetrating the brain.
  - *Mobile gas unit*: Pigs are placed into a mobile container that will be filled with a gas or gasmixture. The choice of a method depends on the farm situation and training of staff is essential. More info on BTSF elearning: <https://btsfacademy.eu/training/mod/page/view.php?id=132>
3. *Euthanasia on farm*. Euthanasia includes ending the life of an individual animal in a way that minimizes or eliminates pain and distress. This corresponds to the general requirement of the Council Regulation (EC) No 1099/2009 to protect animals at the time of killing such that they are spared any avoidable pain, distress or suffering (Article 3). Euthanasia methods can also be found in the Regulation 1099/2009. A review on the topic of on-farm euthanasia of suckling piglets is being prepared by EURCAW-Pigs and expected late 2021/early 2022. The review also includes an example of an on-farm euthanasia decision tool for piglets.

### Tail docking: Action Plans

Member States have been asked to provide Tail docking Action Plans indicating: (1) Means of achieving compliance with the Directive (e.g. mandatory actions, stakeholders' involvement and training, funding possibilities); (2) Taking into account Compliance Criteria, Risk Assessment and Farm Improvement Measures in accordance with the Recommendation 2016/336/EU; (3) Clear objectives and timelines for implementation.

The following main issues were discussed and [replied to](#) by Hans Spoolder:

1. *How do member states implement on farm 'risk assessment' required by the Action Plans?*  
Recommendation 2016/336/EU recommends in Art 2A-2: "MS to ensure farmers carry out risk assessment". Member States should ensure that farmers carry out a risk assessment of the incidence of tail-biting based on animal and non-animal based indicators. This is not legally binding, but carries "legal weight". The recommendation was agreed by MS and pig sector. The risk assessment is based on six areas of risk:



On the question on how to do a risk assessment the first step is to agree a standard risk assessment protocol. Some MS do this together with their pig industry. They suggest that for setting up a protocol it helps to set up an R&D project to identify individual elements, to keep it simple ('yes – no' questions are preferred), and to use a 'decision tree' structure. Some MS ask farmers to run the Risk Assessment themselves, and report on it during CA inspection visits. Some ask trained veterinarians to do the risk assessment together with the farmers, their efforts are checked by the CA, one MS recruits 'coaches' to help farmers write their action plan (veterinary or other advisors), the results are checked by the CA. Farms should be regularly visited to check the implementation of actions (every six months?). This may not be feasible in some countries. A dedicated team of inspectors could focus on one issue. However, checking one important risk factor only (e.g. enrichment) and temporarily ignoring the rest, is not allowed by the EU Commission, all six factors have to be checked.

2. *What is happening with the outcomes of the risk assessment?* An outcome could be that there too many risks, and that docking cannot be stopped yet. In that case the farmer should keep trying to reduce the risks, and there should be regular return visits and re-assessments of what happens (Plan-Do-Check-Act). 2% damaged tails at the abattoir was suggested by some MS as an average (presumably in docked pigs) and could serve as an intervention level or threshold. Note that the pig sub-group of the EU Platform on Animal Welfare's did not conclude on a threshold. When the risks and bites are low, stopping of docking should gradually be done, a few pens at a time. The farmer should build confidence, and the progress should be evaluated gradually.
3. *How to grow the tails back on?* Farmers are well informed about the risk factors. They know what to do, but they can't seem to make it work on their farm! Many farmers are afraid; even a little bit of tail biting is a barrier for farmers. We have generations of farmers that have only docked. Not docking is completely new, and they need time for transition. You need 'pioneers': farmers who are willing and able, and are supported in controlling tail biting, e.g. by providing intervention opportunities and by learning to keep an eye on pigs to recognize early sign of tail biting such as hanging tails. Who could provide this support? E.g. are vets trained sufficiently regarding how to keep pigs with intact tails? Key in controlling tail biting seems to start to control the risk factors from birth onwards, and continue in the weaner and rearing phase. Suckling piglets is key. Other incentives to stop docking are industry drivers such as quality assurance schemes, possibly subsidies through the reformed CA and the European Innovation Partnership (EIP). Also, there should be no market barriers (e.g. "no one wants my long tailed weaners"). It was concluded that above all, the attitude towards docking is crucial, if a farmer wants to make long tails a success.

## Close

Before closing the meeting, Kirsten Vornhagen thanked all the participants for joining the meeting, also on behalf of EURCAW-Pigs. "showing where the problems are is a good way to solve these problems." She was pleased with the discussions and the wrap-ups of the second day, and she hopes that the information will be shared widely. She looks forward to the next meeting, either physical or virtual.

*Hans Spolder closed the meeting at 12:15h.*