Meeting of the sub-group on the welfare of pigs

Tenth meeting, 8 May 2023
(Videoconference)

– MINUTES –

Attendance

Independent expert	Anna Valros Anne-Claire Berensten
Civil society organisations	CIWF
Business and professional organisations	COGECA FVE UECBV
Member States	Denmark Germany Italy
European Commission	DG SANTE G5
Guest	European Reference Centre for the Welfare of pigs External contractor for IA study on kept animals

Discussions on *various questions on enrichment material, tail docking, space allowances and animal welfare indicators*

1. Context by the Commission

The Commission opened the discussion and explained the purpose of the meeting, i.e., to obtain the opinion of the members on specific questions which have arisen during the reflection on the revision of pig welfare legislation.

2. Provision of enrichment materials

Q: What exact modifications should be done to the slurry system and to the flooring (slats) in order to be compatible with loose organic[1] enrichment? (Current legislation sets widths of slats that are not compatible with enrichment, so the slurry systems must be modified, including the width of slats and other flooring features).

Regarding the **slurry system**, members suggested the following solutions:

a) If straw or other loose organic material is provided on the floor in quantities to act as bedding, the slurry system should have scrapers running in its channels under the floor to remove the material.

[1] For the purpose of this minutes, the term 'organic' is used to describe the natural origin of an agricultural or forestry product and its derived products, unless otherwise specified. It is not used within the meaning of Regulation (EU) 2018/848 of the European Parliament and of the Council laying down the rules on organic production and labelling of organic products.

b) If straw or other loose organic material is provided in moderate quantities as an enrichment on the lying area or in a straw rack, the slurry system can work efficiently with vacuum piping, provided that the opening of the pipes is at least 250 mm and the pipes do not have sharp corners.

In Finland, most farms operate with vacuum systems. In Sweden, there is a recommendation that farrowing units use scrapers, while for weaners and rearing pigs, vacuum systems with a diameter of 250mm is common. In south Europe, vacuum piping of 150mm is usually used, so straw is commonly provided in straw racks to avoid blocking the slurry. Research conducted in northern Italy, suggested a width of 300mm for the slurry pipes.

The installation of scrapers in old buildings was considered challenging and frequently impossible. The use of scrapers can also pose challenges in terms of air exchange. A member pointed out that the use of scrapers results in material that is neither solid nor liquid, which is a challenge to deal with as farmers currently only deal with liquid manure.

Regarding the **flooring**, several members argued that it is essential to have solid flooring, at least partially, in order to be able to provide loose enrichment material. The smaller amount of solid floor, the more the risk that enrichment material goes into the slurry. To this end, there are technical solutions that can be implemented to allow current slurry systems to work with loose enrichment material to a certain extent.

For example, German farms using straw carried out a demonstration on practical solutions to enable the use of straw or hay on existing fully slatted floors. They came up with some interesting ideas, such as:

- Using stoppers that close the slats of the slatted floor in order to create a solid area above which the farmer can hang a straw basket.
- Use of metal frames with side walls where straw is placed and visited by the pigs.
- Installation of pumps outside the slurry or in the walls of the slurry, which are able to pump and mix the manure into the slurry system.

In Italy, several farmers use rubber mats to prevent the straw from going into the slurry. Rubber mats have the disadvantage[2] of being easily removed by the pigs, therefore they should be very well fixated on the slats.

Members did not identify hygiene problems coming particularly from solutions that close the slats to create a part solid flooring (see also point 4 on space allowance).

As regards the openings of the slats, Sweden uses the same openings as in EU legislation and they work well with the straw. Denmark informed that practical experience had shown problems when partially slatted floors with openings between slats as in EU legislation were used. These openings are not large enough to allow sufficient passage of a straw-manure mixture, and this results in clogging up of the openings - most evident, when long straw is used. In Lower Saxony where farms have fully slatted floors, they are able to provide the pigs with straw in racks while closing the floor beneath the rack to prevent the straw from entering the slats. This practice works with normal slat widths and the current slurry systems.

A member stressed that the change of the slurry surface, in whichever way, can influence the greenhouse gas emissions. Ammonia emissions depend on the surface of the slurry pit/channel and methane emissions on the frequency of slurry removal. The potential use of pumping may increase the emissions.

The positioning of solid floor should also be examined. For practical reasons, farmers prefer to place the solid flooring towards the corridor between the pens, as it is easier to distribute the straw. Pigs prefer the solid floor towards the back walls where the area is calmer.

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[2] One member commented in writing after the meeting that rubber mats have the disadvantage of being very warm for the pigs to lie on, due to low heat transfer, and this makes rubber mats less suitable for use in the lying area of growing pigs.

Where enrichment material is provided in containers such as straw racks, it must be ensured that the containers are placed at an appropriate height for the category of pig being housed and that the openings of the containers are wide enough for the pigs to access the material, i.e., appropriate for the pigs' snouts. It is a common mistake in commercial companies selling straw racks that these openings are not large enough. The appropriate opening of the rack is also depending on the size of the enrichment material and should be bigger when providing long straw and adapted in the case of chopped straw. In Germany, there are specific recommendations on the construction of containers. The emptying level of the rack and the presence of enrichment material on the floor beneath it is also a good indicator of whether a rack works or not.

Q: Which enrichment materials would be suitable during the transitional period (until the modifications of previous point are accomplished) and in which amount? What is the best enrichment material we can provide the animals already tomorrow which is better than what we provide today but not the optimal that we would like to reach in some years?

Most members are of the opinion that modifications to current conventional housing systems, as described above, can already allow the provision of organic enrichment material to pigs, probably not accessed unlimitedly on the floor but limitedly through racks. Therefore, there is no need to be prescriptive in legislation or specify a narrower list of enrichment materials to be used during a long transitional period. However, it would be important to lay down the qualities of the material, e.g., organic and loose, and leave all options to be chosen by the farmer.

Where limited access to loose material is provided through racks, several members consider that it would be beneficial for pigs to also be given access to a destructible, natural material that is always present and available to the pigs, such as hessian sacks, ropes, natural fibres and fresh, interesting wood/wood sticks. The positioning (vertical/horizontal) and size and of the material have to be appropriate so that pigs can get their mouth around it and chew it. In Portugal, farmers use wooden sticks suspended in the middle of the pen, that are replaced every 2 weeks. Again, an outcome-based indicator such as the exhaustion of the material by one batch of pigs in the pen and the need to replace it, was considered a measure of its success as enrichment.

Novelty of the enrichment is also important and therefore the switching between different enrichment materials is more efficient.

A member referred to possible business opportunities for the creation of new enrichment materials, e.g., based on side-products from feed industry or forestry.

A member raised the potential role of straw in the transmission of African swine fever.

Q: EFSA opinion recommends the provision of at 20gr of straw /rearing pig/day, but indicates that more is better e.g., 400gr. What would be an appropriate quantity in your opinion?

Members consider it difficult to provide a precise recommendation on the amount of enrichment material, as it depends on the farm and the age of pigs. In addition, prescribing a specific amount of enrichment would be challenging from an enforcement point of view.

Above all, members believe it is not the quantity that is important, but the actual use of the material by the pigs, otherwise its provision will not reduce tail biting and its use might be pointless. It is also important that the enrichment is replenished regularly as the new material is more interesting for the pigs. It is therefore better to give pigs small amounts of enrichment once or twice a day than one big amount once a week.

On the question of amount, questionnaires filled by farmers in Sweden and Finland reveal that they use median amounts of 29 gr for nursery pigs and 50 gr for slaughter pigs, per day per pig. In Sweden, another study described the use of a median amount of 60gr per finishing pig per day but showing a greater variation. Farmers in these countries often reply they would be keen on giving more enrichment to the pigs, but the slurry system is a limiting factor.

One member researched industry recommendations and found a wide variation from one operator to another: some recommend 10g of enrichment for piglets and 10-50g for fatteners, others 15 to 30g per animal. Organic[3] farmers use up to 300gr per pig per day.

Technological advancements have led to the creation of automated systems for the distribution of large amounts of straw in the farms. In such systems, farmers only load the bails of straw in convey belts. A machinery mixes and cuts the straw and carries it in the stable through a pipe, releasing the material in the pens through appropriate openings, without any manual labour. These systems must be designed and operated thoroughly, as commonly they are designed to distribute the straw in solid area, which is usually the lying area. As a result, the straw falls on resting pigs and unsettles them.

In any case, amounts of straw as high as 400 gr per animal, would not be feasible in fattening establishments that could easily house e.g., 2000 pigs. Such a requirement could lead to huge needs of straw and straw shortages in the EU.

Q: According to your practical experience, what should be the amount of enrichment material pre-farrowing (nesting material) and post-farrowing for sows and piglets?

For nest-building material, several members suggested that it should be available all the time and accessible to the sow. If temporary crating is practiced, straw must be provided through a rack, as if it is given loose on the floor, the sow will manipulate it and pull it away unintentionally, out of her reach.

Other members referred to good experimental results by using jute bags, included on slatted based systems, which benefit both the piglets and the sow. Pre farrowing, jute bags are used by sows to build their nests - even if they cannot make a proper nest of it - they direct their behaviour to using jute bags. However, the use of jute bags cannot be considered as a novel idea, as it is common practice in many farms nowadays including where crating is practised. In the latter case, providing jute bags or other nesting material fixed to the crate, is better than nothing, but not comparable to a loose sow fully expressing nesting behaviour by moving around and building her nest.

In Italy, several farms use paper for nest building and around farrowing, which has shown to be beneficial both for the piglets and the sow. Paper also works well with the slurry system.

In Sweden, where sows are kept loose around farrowing, farmers give around 3 to 5 kg per sow for nest building. Straw should be long cut otherwise it goes away quickly and cannot serve to stimulate the nest building, which is very important for sows kept loose.

Q: if temporary confinement is allowed would it be possible that the sow is confined at the last minute after she has expressed her nesting behaviour?

Most members were not in favour of such an approach, considering it non-realistic because a) the majority of sows farrow during the night when most farms do not occupy staff. All farrowing sows are crated in the evening and if they have not farrowed by next morning, they are let out again b) farms that have many sows cannot monitor every sow starting to farrow and c) there are some studies showing sows get stressed when they are crated just when farrowing is starting, which may lead to problems with the farrowing duration.

3. Tail docking

Q: Is a derogation to allow tail docking in case of tail biting outbreaks needed in future legislation? If yes, under which conditions should it be allowed? (Percentage of bitten animals? Other? For how long?)

Most members were not in favour of having a derogation to allow tail docking in the revised legislation, because:

[3] Term used within the meaning of Regulation (EU) 2018/848 of the European Parliament and of the Council laying down the rules on organic production and labelling of organic products.

- There is no need for a derogation once necessary changes to keep pigs with intact tails are done, i.e., change of stocking density, addition of enrichment etc. Countries like Sweden, Finland, Norway, and Switzerland have proven it is feasible to ban tail docking under all circumstances and different production systems.
- Tail biting outbreaks cannot be handled with derogations to allow tail docking. An outbreak means there is a suddenly occurring problem, which should be normally fixed before getting the new pigs that are young enough to be docked before they come to the farm. A long-lasting outbreak would not really be an outbreak but a long-standing problem of the farm.
- In practice, derogations are problematic as they can quickly become rules.
- A derogation would be difficult to maintain without allowing farmers who are not motivated to just keep on docking. Having a derogation would result again in the situation we face now in the EU.
- A derogation would be an administrative burden for competent authorities.
- A derogation would be very complicated from a logistic point of view, i.e., difficult to keep track of the origin of the incoming pigs which have not always been raised in the same farm. It is also complicated to ensure that only the exact number of pigs that are needed on the farm have been docked in the farm of origin.
- It would be difficult to set the conditions for a derogation e.g., for how long it should last.
- Farmers will experience positive side-effects of making adequate changes, like increased growth rates and healthier pigs that come with reduced stress level.
- A derogation is not needed provided there is a sufficient transitional period. Such a transitional period should make sure that when the tail docking ban comes in force, all farmers can comply with it. If such a transitional period is given, a derogation is redundant. It would be an extension of the transitional period, which should not be given to farmers that are not willing to use the transitional period in a constructive way.

Few members were of the opinion that a derogation would be useful in case of tail biting outbreaks, as tail biting is multifactorial and influenced by farmers' experience and climate conditions, which vary widely across the EU. Also, some tail biting risk factors take longer to mitigate than others.

In case there is a derogation, members provided the different ideas:

- The derogation should foresee strict and unattractive requirements, to discourage farms from making use of it, otherwise it would lead to the same situation as nowadays.
- The derogation should require the farmer to investigate and come up with precise reasoning for the tail biting outbreak.
- The derogation should require the farmer to show that he/she has identified the risks, and ways to manage them and keep them under control, similarly to the HACCP plan used in the context of food hygiene.
- The derogation should require the farmer to establish a very specific plan to return to the non-tail docking situation, that has to be met within a certain time period. Otherwise, the farm must stop its activities because the farmer is not able to take care of pigs.
- The derogation should not be dependent on a farm risk assessment, investigation, action plan etc., (i.e., opposite to the last three points above).
- The decision on whether a farm may keep tail docked pigs or not should not be a decision of the competent authority.
- The derogation should establish an automatic requirement for the farm that uses the derogation, such as to give more space to pigs or provide them with roughage. As one of the risk factors for tail biting is space allowance, the ideal requirement would be based on space (dual k value model). This

would also be preferable from a competent authority point of view, as it is easily verifiable and from a farmer's point of view as it is more efficient to have intact pigs without tail lesions in less space and therefore, spare costs.

Q: Is a ban of tail docking requiring a redesigning of buildings or is it sufficient to manage through management, nutrition etc?

That depends on each farm. In general, there are a lot of actions to be taken without reconstructing the farm, e.g., reducing the stocking density which does not need rebuilding, or providing more feeding space or watering, which needs some reconstructing but not taking down the walls. Ultimately, there will be farms that are built very badly and will not be able to handle the ban of tail docking. They will have to either rebuilt their premises or be out of business.

In Germany, experience shows that most of the farms, including commercial farms, that attempt to raise intact pigs succeed in existing buildings, by changing the management and applying slight modifications in feeding, watering and air conditioning. Few farms that did not succeed were built in a way that allowed a permanent drought. In Lower Saxony, over 200 farms with fully slatted conventional buildings have succeeded to raise intact pigs.

Q: In case of providing a dual k value[4] (higher stocking density for farmers with few tail lesions at slaughter), is the space corresponding to a k=0,036 enough to control tail biting behaviour? (According to EFSA opinion, this space allowance is relatively reducing tail biting to 48%, compared to 100% of current situation of k=0,028).

The logic of selecting k=0,036 as the incentivising level of a dual k value system was that it is successfully used in some countries that raise undocked pigs (e.g., NO and CH, although Sweden and Finland use a slightly higher space allowance).

Several members believe that it would be feasible to raise intact pigs in space corresponding to a k value of 0,036 but in a marginal manner, i.e., only the good farms would be able to manage with a space around 0,8-0,9m^2 for a 110kg pig. It would therefore be a challenge for most farms to handle non docking and having low tail lesions in this amount of space. It is likely that farmers would go to a higher space that would make their daily practice a lot easier, as shown by the experience of Finland, where the legislation allows for 0,9m^2 for pigs over 107kg but most farms apply 1m^2. Also, adding space, influences positively many other aspects i.e., possibility of higher feeder space and less competition for feed and water.

Also, a member questioned the use of the tail lesions at slaughter being the sole basis for the implementation of the dual k model because the measuring of tail lesions is not harmonised. Another member pointed out that there needs to be a common measuring system, preferably automated, to assess the tail condition at the slaughterhouses.

It was suggested that a dual k value system based on the tail lesions measured at slaughter, should be based on measurements gathered over a representative amount of time in order to allow for some fluctuation on the number of lesions. Also, if tail biting episodes occur during the rearing period, the farmer would not be able to react by changing the overall stocking density of the farm, as the pigs remain on the farm until they are taken

[4] Background: At the 3rd and 5th meetings of the subgroup, a proposal was made to use a double k-value during the transitional period towards no routine tail docking, with k-values higher than the current legal requirement. The logic was to give farmers an incentive not to tail dock by allowing them to keep pigs at higher stocking densities as long as they manage to keep the pigs intact and the percentage (X%) of tail lesions found at slaughter less than a predefined value. On reflection, this exact proposal would not be feasible during the transitional period. The reason is that the transitional period would be the time given to farmers to make investments to adapt to a new, higher space requirement. Therefore, the new, higher space allowance would not be in force during the transitional period so a dual k value model cannot be proposed based on that. Alternatively, a dual k model could be applied a) during the transition period but in a different format, i.e., reversed to require farms not keeping intact pigs to provide more space than the current legal requirement and b) once the new space requirement comes into force. In this case, as routine tail docking would no longer be possible, the only indicator to allow good farmers to use higher stocking densities than required by law would be the low level of tail lesions at slaughter. This new option (b) was presented to the members for discussion.

to slaughter. In such a case, a farmer would have to apply a lower stocking density for the next batch of rearing pigs and get back to the normal density at the first batch after having reached the appropriate (low) number of tail lesions.

A member believes that applying a dual k value system giving farmers the opportunity to raise intact pigs in higher stocking density (up to k 0,036) would be a very significant incentive to change anything related to the farm management and would lead to fast learning on how to raise non docked pigs. The bigger the difference between the two k values of the dual system, the bigger the incentive would be. Another member believes that space is important but not enough, so there is no need to push for more space, as there are already farms that manage to keep pigs with intact tails under the current k requirements (k=0,028).

Finally, one member sees that the double k-value could change farmers' chances of getting investment loans. In Finland, for example, banks only lend money to farmers who go beyond the minimum legal requirements. Therefore, legislating 2 k-values would mean that a good farmer using the lower k-value (higher stocking density because he/she can manage tail biting) and wishing to obtain a loan to invest in space, would have to aim to an increase above the highest k-value of the dual k-system (and not above the lower one that he/she applies), as this would be the threshold for obtaining a loan.

4. Space allowances

Q: To calculate the needed space per weaner/rearing pig one can use a formula based on weight or fixed space allowances according to weight categories. What would that mean from a farmer's and an inspector's point of view?

Some members feel that the current weight categories do not work well, particularly for the post-weaning period (from 7 to around 30 kg) and the start of fattening (after 30 kg). During these periods, the space given to animals under current legislation is not sufficient. For example, pigs grow in a space of 0.3m^2 from the moment they weigh 7kg until they reach 30kg. Therefore, more attention should be paid to these stages of growth in terms of providing sufficient space and not only to the later stages of finishing.

In addition, the multiple weight categories used in current legislation, foresee a frequent, gradual attribution of space to growing pigs, e.g., from 0,4m^2 to 0,5m^2, then to 0,6m^2 etc. By doing so, legislation triggers farmers to also modify the grouping of pigs (mixing and splitting) systematically, which is not a good practice from an animal welfare and health point of view. It has been observed in incentive industry schemes in Italy and Germany that when farms are rewarded for providing more space to pigs, instead of changing the working arrangements, they mix pigs intensively by creating new groups, in an attempt to use the available space as much as possible.

Regarding the method for calculating space allowance, the following options were identified:

1. having *weight categories*, but decreasing their number compared to those of the current legislation because it leads to the mixing of pigs, as explained above. The prevailing opinion of the members who agreed with this approach was to have one category for the post weaning period (between weaning and 30kg) and two or three for the fattening period, i.e., 30-60kg, 60-125kg and 125kg to the heaviest weight grown in the EU, probably 170kg (Italian pigs). However, by defining categories there is a risk that they are not always suitable for every management system and therefore, do not provide enough flexibility for the farmer.
2. using a *mathematical formula*, based on pig weight. Members defending this approach consider that it gives more flexibility to the farmer to ensure that pigs have the appropriate space at any given time. However, some members consider this type of continuous system would equal a system with plenty of small-range categories, posing the risk of multiple mixing of pigs.

From an inspector's point of view, it was initially considered that option 2 would not be easily verifiable, as weight is a constant variable that changes over time and the inspector would not have a clear-cut indication

for the weight category of the animals. However, some members have the opinion that there is no practical difference in the inspection procedure. In both options, pigs are kept in groups and the inspector will have to estimate the weight of the pigs and the size of the pen to decide if the pen fits with the corresponding requirement and whether the farmer complies or not with the legislation.

In this regard, some members consider that the size of any pen with grouped pigs should correspond to the target weight of the animals when they leave the pen, e.g., a group of pigs entering a pen in the fattening unit at a weight of 30kg and intended to reach 60kg while being in the same pen, should be given the space corresponding to 60kg each, throughout their stay in that pen (from the moment they enter). This principle is consistent with the all-in-all-out systems that prevail in the EU. For example, a fattening farm of 2000m^2 can deliver 2000 finishers over 110kg, i.e., 1 pig per m^2, as this is the holding's capacity in terms of available space, under the current legal requirements.

However, on farms where one single pen is used throughout the fattening period, this principle can have a significant economic impact as it would mean that farms that slaughter pigs e.g., at a weight of 125kg should attribute 1m^2 to all pigs of 30kg. In addition, it has been observed in Sweden, where solid flooring is provided, that when pigs are given a lot of space, they tend to use part of it for lying down and the rest for dunging. To prevent such hygiene problems, some solid floor farms in Switzerland and Germany, use a system that allows the size of the pen to increase as the pigs grow. This is achieved by having a movable end.

Q: Recent EFSA opinion recommends the provision of solid floor corresponding to k=0,033 for weaners and rearing pigs. Is this space adequate for all pens, including farrowing and hospital pens?

A member considers that a solid area corresponding to a k=0,033 would be enough for the farrowing unit, both for piglets and sows, however, more solid floor would be better, e.g., 2/3 of the total space. One member believes that loose farrowing with provision of nesting material would require more solid floor. Another member said that since farrowing takes place in individual housing, there can be no rule based on this k value and that it is difficult to determine a specific amount of space, as there are many factors influencing the construction of a farrowing pen.

One member is of the opinion that a solid floor corresponding to a k=0,033 would not be enough for hospital pens, as sick animals should have a larger, softer, lying area. Denmark requires that hospital pens have a total area which is twice as big as the EU legal requirement for space allowance.

Q: For pigs to lie in full recumbency, a space corresponding to k=0,047 is needed. However, pigs usually lie on solid floor and the EFSA opinion recommends that this solid floor should correspond to a space of k=0,033. Does this difference have implications?

According to a member's explanations, a space corresponding to a k=0,047 ensures that a pig can lie in a fully recumbent position without necessarily touching other pigs. Normally the pigs would lie together and would be in contact with other pigs. Therefore, under thermoneutral conditions all pigs would fit in a space corresponding to a k=0,033. When the temperature is very high, pigs would try to lie apart and would need the extra space to thermoregulate. However, in such conditions, pigs would also lie on the slats, therefore there is no contradiction between the two k values.

Some members argued that more solid floor could create more emissions and impact the climate, but this was disputed by others that consider that a clean and dry solid floor would not increase the emissions.

A few items on the agenda, in particular on animal welfare indicators, were not discussed at this meeting due to lack of time. Few of the above questions were introduced in the course of the meeting.