

## Question to EURCAW-Poultry-SFA

Reference of the query: Q2E-Poultry-SFA-2020-002

Query received: October 26, 2020

Date of admissibility: February 2, 2021

Reply sent: June 10, 2021

## Background context provided by the solicitor

The capacity of a mink farm in the growth season i.e. from after weaning in July to pelting in November.

We want to raise a query regarding the increase in the capacity of a mink farm based on installing extensions in height to the initial cages. To do this, they would maintain the same number of cages, but with "balconies" increasing the space allowance by putting platforms in different levels

**Key words:** Behaviour

**Level:** Husbandry, breeding

**Type of production:** Fur animals, mink (Neovison vison)

**Reference(s) to legislation:**

**EU:** Council Directive 98/58/EC of 20 July 1998 concerning the protection of animals kept for farming purposes. <https://eur-lex.europa.eu/eli/dir/1998/58/oj>

**CoE:** Recommendation concerning fur animals, adopted by the Standing Committee on 22 June 1999. [https://www.coe.int/t/e/legal\\_affairs/legal\\_co-operation/biological\\_safety\\_and\\_use\\_of\\_animals/farming/Rec%20fur%20animals%20E%201999.asp#TopOfPage](https://www.coe.int/t/e/legal_affairs/legal_co-operation/biological_safety_and_use_of_animals/farming/Rec%20fur%20animals%20E%201999.asp#TopOfPage)

## Question

The questions from the requestor have been reformulated in order to avoid any interpretation of the legislation that is not under the remit of the Centre.

1. According to the Recommendation for fur animals of June 22, 1999, it does not seem that it is an adequate system to increase the cage surface and therefore the capacity, since, in terms of its adaptation to this Recommendation, which contains a minimum height of 45 cm, if the height of the balconies is lower, it could not be considered as a useful surface to be computed. We would like to know if addition of balconies in existing mink cage represents a threat to mink welfare, considering the fact that height under the balcony area will be less than 45 cm?
2. In the case that the height of the balcony reaches a minimum of 45 cm, could this impede the hygienic collection of excreta?
3. Regarding the extensions in height, the Recommendation specifies that cages cannot be piled up. What is the common practice in other Member States?
4. On the other hand, in the Recommendation it appears that the reproducers must be alone (or with puppies) in cages of 2550 cm<sup>2</sup>. For young individuals, a minimum of 2550 cm<sup>2</sup> would be needed to house 2 young individuals (+ 850cm<sup>2</sup> / individual more). Is this space allowance per animal needed

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to meet the welfare requirements? What is the maximum number of animals per cage without major welfare consequences?

5. We think that some parameters and criteria should be established at a general level, since it is an issue that may affect other Autonomous Communities and even other Member States. The breeding of mink for fur also raises many susceptibilities, and the criteria to be implemented should be homogeneous, so we believe it appropriate to refer the question to the Reference Centre for the welfare of birds and other small animals.

## Answer

The answer is based on the scientific knowledge, which is also behind the WelFur-Mink protocol (Møller et al., 2015) and its implementation on European mink farms. The questions are centred around the Council of Europe (CoE) recommendations from 1999. As the recommendations are minimum requirements, they should be incorporated in the national legislation of all CoE member states. The answer to the request also takes into account the legislation in Denmark (Danish Order, 2015). The legislation seems to be quite similar in e.g. Norway, Sweden, The Netherlands, and Poland. Further details are found in the Danish mink industry code (Appendix 1 – Cages, 2017), which is approved by 'The Ministry of Environment and Food - The Danish Veterinary and Food Administration'. To the Centre's knowledge, these detailed interpretations may differ between countries. It seems that a quite uniform interpretation has developed in many European countries and EU member states. This is reflected by a very low degree of variation in cage dimensions and design across EU member states and associated countries that did not banned fur farming, as revealed by the WelFur-Mink assessments on approx. 2500 mink farms in each of 3 annual seasons. This can be seen as a homogenous implementation of the CoE recommendations, but it cannot be qualified as the correct or only interpretation. By definition, the reference centre is not in a position to suggest interpretations of legislation, but can only give answers based on scientific knowledge available and inform about known interpretations of member states. Based on this, the answers below can be given.

### A short introduction to the social biology of the mink.

The mink (*Neovison vison*) has a strict annual cycle of reproduction and under natural conditions, juvenile mink would disperse after weaning, in July - September in search for a territory that could sustain them during the winter (Dunstone, 1993; Birks 1986). In order to acquire mating skills enabling them to mate properly as adults, juveniles need to socialise with other mink, preferably of the opposite sex, during the growth season from early July to late November. Juvenile mink become increasingly solitary after the autumn equinox, which is an important signal to the mink that winter is approaching, initiating a number of behavioural changes including the establishment of a territory, sexual development and the change from summer to winter fur. This may lead to territorial aggression. As the territory of male mink may overlap that of several females, while the territory of mink of the same sex will not overlap in nature, aggression is mainly between mink of the same sex. The risk of aggressive encounters in production, therefore, seems to depend on the number of mink and in particular the number of mink of the same sex in the same cage and thus in the same cage/territory. As a rule of thumb, one in 1000 mink will have to be moved and treated or euthanized due to aggression when one male and one female juvenile is housed together (Møller et al., 2013). If four mink are housed together, the number will be two in 100. In conclusion, keeping juvenile mink in male + female pairs fulfils the juveniles need to socialise with other mink, with the least risk of aggression. Housing more than two juveniles in the same cage during the growth season increases the risk of injuries and thus cannot be recommended for welfare reasons irrespective to the farming system due to the solitary nature of mink (Hansen & Damgaard, 1991; Hänninen et al., 2008; Mononen et al., 2000; Pedersen & Jeppesen, 2001; Pedersen et al., 2004,).

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### **Question 1 about a shelf (balcony) in the cage.**

A shelf, bunk, or balcony in the cage acts as an enrichment to the mink that is used by the mink in all phases of production. It is used as an elevated place for resting and oversight (Hansen et al., 2011), as well as refuge for the mother during lactation (Mason et al., 2012), effective for the first six weeks after birth (Dawson et al., 2013; Hansen 1990). It has been found to reduce the abnormal behaviour stereotypy during lactation (Hansen, 1990) and in combination with other enrichments such as objects that can be moved, manipulated or ripped apart, lowers stress measured as stress hormone (FCM) (Hansen et al., 2007) and even contribute to increased reproduction success of the farm mink (Boub et al., 2013).

The reasoning behind the cage height of 45 cm seems to be, that the mink should be able to stand comfortably on their hind legs (freedom of movement). Traditionally, mink are fed on top of the front of the cage. Recent research, however, shows that mink actually prefer to eat from the lowest height tested (25 cm) rather than standing up eating from the top of the cage (Diez-León et al., 2017), which may lead to different feeding practices, rather than indicating a preference of lower cage heights. At least some male mink seemed to prefer to be able to stand upright even when not forced to do so in order to eat, and the authors therefore suggest that cage height should allow for this (Diez-León et al., 2017).

As we understand the first question, it is about whether the area under the shelf or balcony enrichment is a threat for the welfare of the mink, and thus the cage size, if the height beneath the balcony is below 45 cm, as depicted in the cage example in the query. If the reasoning for the cage height that is found in the CoE recommendation for fur animals is that the mink should be able to stand comfortably on their hind legs, the cage height in the rest of the cage does not prevent this. The balcony or shelf is installed as an enrichment and provides more dynamic space for the mink. Therefore, the presence of the balcony provides an enrichment and does not prevent animals to stand since in other places in the cage the high of more than 45cm is available. For example in Denmark it is required by law to have a shelf or balcony, and according to the Danish mink industry code, it is neither added to nor subtracted from the free cage area available to the mink. The same line of reasoning is followed in WelFur-Mink and, to the best of our knowledge, also by Norway, Sweden and other European countries.

### **Question 2 about hygienic collection of excreta**

The answer follows from the answer to question 1. The question about hygienic collection of excreta should not be a problem as farm mink tend to defecate and urinate at the end of the cage, far from the next box and close to the water supply, which allows for efficient slurry systems under this part of the cage. If the access hole between an upper cage extension and the lower cage is placed in front of the upper cage, mink will defecate in the normal place in the lower part of the cage. This means that mink do not defecate from the balcony, nor from the second floor cage extension, as long as the access hole between the lower and upper cage is placed in front of the cage. If the access hole was to be placed over the shelf/balcony the furthest distance away from the nest box would be in front of the upper cage, over the entrance to the nest box, and some mink would defecate here. It is therefore important that the access is placed in the front of the extension, close to the nest box. This means that the height of the balcony is in no way related to the hygienic collection of excreta, as this is collected under the back end of the cage. The main issue is that the cage is at a sufficient height above the ground to allow for a slurry system or for hygienic collection of faeces from under the cage as stated in the CoE recommendations, Article 25, APPENDIX A : SPECIAL PROVISIONS FOR MINK, Note 5.

### **Question 3 about increasing the available cage area by adding an extensions in height**

The available space can be increased in several ways e.g. by larger cage dimensions, combination of two neighbouring cages or by adding a second floor. Extensions in height by adding a second floor is the most common practice in Europe, Based on WelFur-Mink assessment of more than 2500 mink farms in 27 European countries.

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According to CoE recommendations, cages should be placed at a sufficient height to allow for easy removal of faeces and cages shall not be placed one above the other. The question is whether increasing the available cage area by adding an extension in height, is in accordance with the CoE recommendations that ‘cages shall not be placed one above the other’. According to the Danish mink industry code, the Danish cage size requirements derived from the CoE recommendations can be achieved by adding a second floor to a standard cage. Thus, increasing the available cage area by adding an extension in height is allowed in Denmark (Appendix 1 – Cages, 2017). To the best of our knowledge, this is also the case in Sweden, Norway, the Netherlands, and Poland. Results from WelFur-Mink show, that group housing of more than two mink is common in all 24 European mink producing countries. The most common practice seems to be in cages with two floors.

The reasoning behind the CoE recommendations that cages shall not be placed one above the other seems to be that cages with different mink shall not be placed one above the other as the mink in the upper cage will then defecate and urinate on the mink in the lower cage. Mink in cages with a second floor extension will not defecate from the second floor, as long as the access hole between the lower and upper cage is placed in front of the cage (see answer to **question 2**).

#### **Question 4 about cage size for adult breeding stock, females with kits and juveniles during the growth period**

According to the CoE recommendations, the minimum cage size for a single adult mink, a single adult mink with kits or for two juvenile mink after weaning is 2550 cm<sup>2</sup>. Each extra juvenile should have 850 cm<sup>2</sup> i.e. three juveniles should have a total of = 3.400 cm<sup>2</sup>, four juveniles = 4.250 cm<sup>2</sup>, five = 5.100 cm<sup>2</sup> and so on. The standard cage presented in the query is 91.44 cm x 30.48 cm = 2787 cm<sup>2</sup> and would thus allow for a single adult mink, a single adult female with kits or for two juvenile mink after weaning. The area of the second floor extension is 71.12 cm x 30.48 cm = 2168 cm<sup>2</sup>. The combined area is thus 4955 cm<sup>2</sup> allowing for 4 juvenile mink after weaning. According to the Danish mink industry code (Appendix 1 – Cages, 2017), the size of the access hole between the upper and lower cage should be subtracted from the available space as this area is not usable to the animals. The access hole will often be around 230 cm<sup>2</sup>. As the combined area was 4955 cm<sup>2</sup> or 705 cm<sup>2</sup> larger than needed for 4 mink, there would still be 475 cm<sup>2</sup> more than the minimum required, if the access hole is subtracted from the available space. The cage with the second floor extension presented in the query would then be large enough for 4 juvenile mink. The EURCAW has no scientific data to contradict the space allowance figure given by CoE. In general, the space allowance for mink seems to be of little consequence to mink compared to the actual cage design and content in terms of environmental enrichment and number of mink. Adding a second floor can be seen as an environmental enrichment and so can the presence of another juvenile mink during the growth season. More than two juveniles may also be an enrichment, but after the autumn equinox the benefit is outweighed by the risk of territorial aggression as discussed in the introduction. The best combination regarding animal welfare is therefore two juveniles: one male and one female. From experience one adult female and one juvenile male seems to work equally well at least for the juvenile, although there is a lack of experimental data on the issue. In the production, group housing will often be with three or four female juveniles housed together, while the male juveniles are housed one or two together with an adult female, provided the same space requirements as described above. In WelFur-Mink, this is reflected by a higher welfare score for adult females housed alone and for juveniles housed in pairs than for group housing, where group housing is defined by two or more mink of the same sex (Møller et al., 2015). The potential number of aggressive encounters increases with the number of mink above 2, i.e. with the number of mink of the same sex. As mentioned in the short introduction, this means that on average 1 % of juvenile mink housed in pairs and 2 % (a factor 20 increase) of juveniles housed in groups of four will be expected to need treatment or euthanizing due to wounds from aggression (Møller et al., 2013). Thus, housing juvenile mink in groups larger than four will impose a major welfare risk to more than the 2 % of the juvenile mink. Group housing of 5 or more mink together in the autumn was observed in less than 1 % of the mink in Europe according to WelFur-Mink data from 2574 farms in 24 European countries

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from 2017 - 2019. That group housing imposed a higher risk than pairwise housing of juveniles was known in 1999, but even so included in the CoE recommendations.

#### **Question 5 about a common criterion established at a general level**

By definition, the reference Centre is not in a position to suggest standard interpretations of legislation, but can only give answers relating to the scientific knowledge and technical (practical) experience in the field and the known interpretation of member states. In doing so, we hope the answers provided may be helpful.

#### **Relevant references and others documents**

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