

## 7. Meeting of the sub-group on calves and dairy cows

seventh meeting, 17.10.2022, 14:30 to 17:30

(videoconference)

– MINUTES –

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<b>Independent expert</b>	Francesca Fusi
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<b>Civil society organisations</b>	EDA Eurogroup Slow food
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<b>Business and professional organisations</b>	Farm & Animal Health Copa Cogeca
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<b>Member States</b>	Sweden The Netherlands Ireland Denmark
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<b>European Commission</b>	DG SANTE – Colleagues from Unit G3, E4
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<b>Guest</b>	
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## 1. Welcome

The Chair welcomed the participants to the 7th meeting.

## 2. Presentation of legal requirements for housing of dairy cows

### General requirements for housing of dairy cows

COUNCIL DIRECTIVE 98/58/EC of 20 July 1998 concerning the protection of animals kept for farming purposes

#### Article 4

Members States shall ensure that the conditions under which animals (...) are bred or kept, having regard to their species and to their degree of development, adaptation and domestication, and to their physiological and ethological needs (...), comply with the provisions set out in the Annex.

#### Annex

##### Freedom of movement

7. The freedom of movement of an animal, having regard to its species (...), must not be restricted in such a way as to cause it unnecessary suffering or injury.

Where an animal is continuously or regularly tethered or confined, it must be given the space appropriate to its physiological and ethological needs (...).

##### Buildings and accommodation

8. Materials to be used for the construction of accommodation, (...) must not be harmful to the animals and must be capable of being thoroughly cleaned and disinfected.

9. Accommodation and fittings for securing animals shall be constructed and maintained so that there are no sharp edges or protrusions likely to cause injury to the animals.

10. Air circulation, dust levels, temperature, relative air humidity and gas concentrations must be kept within limits which are not harmful to the animals.

11. Animals kept in buildings must not be kept either in permanent darkness or without an appropriate period of rest from artificial lighting. Where the natural light available is insufficient to meet the physiological and ethological needs of the animals, appropriate artificial lighting must be provided.

##### Animals not kept in buildings

12. Animals not kept in buildings shall where necessary and possible be given protection from adverse weather conditions, predators and risks to their health.

##### Automatic or mechanical equipment

13. All automated or mechanical equipment essential for the health and well-being of the animals must be inspected at least once daily. Where defects are discovered, these must be rectified

immediately, or if this is impossible, appropriate steps must be taken to safeguard the health and well-being of the animals.

Where the health and well-being of the animals is dependent on an artificial ventilation system, provision must be made for an appropriate backup system to guarantee sufficient air renewal to preserve the health and well-being of the animals in the event of failure of the system, and an alarm system must be provided to give warning of breakdown. The alarm system must be tested regularly.

Additional provisions on access to pasture and prohibition of tethering in Regulation (EU) 2018/848 for organic production

### **3. Presentation on “Background and conditions for the housing of dairy cows” (Denmark)**

Danish Legislation for dairy cattle and offspring entered into force in 2010. It contains many transition periods and will be fully implemented in 2034 for existing farms.

The intention of this legislation was to ensure a proper framework at all times from an overall perspective, giving a particular consideration to the lowest cow in the herd/hierarchy and the vulnerable situations in production for the individual animal.

It is a comprehensive and detailed legislation, including requirements regarding housing system/design (equipment, feed table, watering, and floor surface), feeding, grazing/access to pasture, cow-calf relationships, calves, young animals and heifers, and milking area.

Danish legislation requires:

- One cubicle/cow provided with bedding, and which length and width must match the size of the animal
- One feeding pace for new calving cows
- Feed 20 h/day
- Feeding drying cow with only straw and water is not allowed
- Total area available per cow 8 m<sup>2</sup> (big breeds)/ 6,6 m<sup>2</sup> (small breeds)
- Passageways’ design takes into account hierarchy
- Water tanks (number/size)
- Access to cow brushes per 50 cows
- Ban of tie stalls from 2022, postponed till 2027 with the condition that such as animals must have access to pasture during summer.
- Handling and supervision once a day, twice a day for sick animals.
- Presence of a claw trimming/treatment facility.
- Individual sick box if necessary; one sick pen per 100 cows by 2024.
- Ensure gentle and hygienic calving environment: calving in separate box, 4 calving boxes per 100 animals, half of them must be separate calving boxes, calf must stay with the dam for at least 12 hours.
- Milking:
  - High-yielding cows with more performance of 25 kg/day should be milked at least 2 times a day
  - The cow must be comfortable in the milking area
  - There are special requirements for the floor in the collection area before milking
  - It must be possible to have milk machinery in sick and calving boxes
- Grazing:
  - huge debate in Denmark about requirements for pasture access for cows.

- There is no legal requirement for grazing, but if the animals are on grass, there are following requirements:
  - Animals must
    - be inspected
    - access to shading
    - Access to drinking water
  - Additional requirements for the driveways
- Welfare indicators: in Denmark it was considered that minimum requirements should be combined with animal-based indicators (mortality, slaughter finds, hoof disorders, etc.). However, systems for assessing animal welfare at herd level are not fully developed (in terms of research and for using by inspection authorities).

### Questions and discussion

The subgroup saluted the Danish requirements on milking and calving areas. For milking the requirements concern mainly the comfort in waiting areas and sufficient space. For calving, a long reflection based on experience was undertaken in Denmark regarding the separation of the cow from the herd before calving and the space in calving pens. A lot of research has been done on this in the last ten years that may require changes in the legislation. The subgroup confirmed that based on practical experience it seems that few days before calving, cows look for isolating themselves, and feel better and safer when moved to calving places. On the question of having individual or group calving pens, the group considered that individual pens are more hygienic and appropriate in big farms. Flexible pens that can be moved around are also a practical and sometimes easier solution.

Regarding the number of hospital or calving pens, it was considered a minimum:

- 1 hospital pen per 100 cows or less
- 2 calving pens/50 cows, 3 pens/75 cows, etc.

The subgroup raised the question of bedding and its minimum depth. While the Danish legislation requires to have sufficient and clean bedding, no minimum requirements on depth are established. The cleanliness of cows is used as indicator of complying with the legal obligation.

It was confirmed that the space allowance requirement of 6,6 m<sup>2</sup>/cow for small breeds to 8 m<sup>2</sup>/cow for big breeds in the Danish legislation concern the total area inside the barn including lying, walking and behind feeders' area; the outdoor areas come in top of this minimum space. The subgroup welcomed this obligation, which was considered a big improvement for animal welfare, even highly above the requirement in the EU organic legislation. On the reaction of the farmers to this measure, it was explained that in a first moment farmers considered the cost of the measure high, but then realised the benefit of having less stressed cows.

In Italy, 6-7 m<sup>2</sup>/head is the minimum requirement in the Classy-farm protocols, considering the lying area covered by a shed, or at least a cubicle/cow (with a range of plus or minus 10% of the medium number of cows). These measures are in line with the 2009 EFSA opinion and the first draft of EU Council requirements.

In Sweden the space allowance requirement for loose housing cows is 8,5 m<sup>2</sup>/cow in deep litter boxes. For cows in other systems, Sweden has space requirement for resting cubicles and aisle.

There was some discussion on the need to be careful when asking for increasing the space allowance for cows, that could represent a high investment for farmers and could favour big farms in detriment of small ones and need solid scientific evidence.

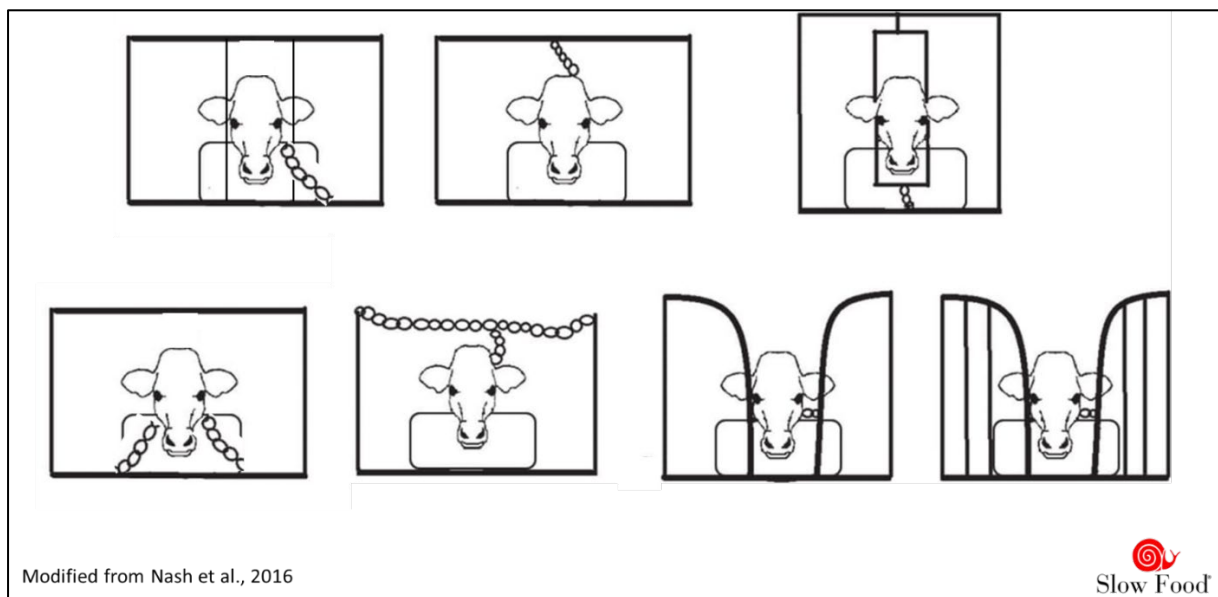
Several members of the subgroup agreed that a small increase of the space allowance would result in a significant improvement of production and considered 10m<sup>2</sup>/cow a good limit to allow a very good health and welfare situation. However, some members were ready to compromise on a lower space allowance if having a mandatory access to pasture.

#### 4. Presentation on “Tie stall and mountain farming systems” (Slow food)

Mountain Farm systems are characterised by small herd sizes (around 15 cows / farm), with often local and dual-purpose breeds (i.e., Alpine grey), low stock densities limited by the area (<2LU/ha), and tie stall housing systems reaching 90% in some areas (70% of them with access to pasture). Forage constitutes most of the diet >70%).

Tie stalls are housing systems in which cattle are tethered by the neck to individual stalls, limiting the overall freedom to move

Common tethering methods are showed in figure 1.



**Figure 1:** Tethering methods

In mountain farms tethering may be:

- Permanent tethering (365 days)
- Tethering during lactating time (305 days)
- Tethering (275 days) with seasonal pasture (in general during summer)
- Tethering (215 days) with seasonal pasture plus a transitional period

Studies have shown (Beaver et al., 2021, Zuliani et al., 2017) that when assessing welfare using Animal Based Measures, different housing systems (i.e., tie stall vs loose housing) pose different risks resulting in different welfare consequences.

Costs for small farmers and topography of mountain areas (lack of land) are the main barriers for conversion of farming systems, and financial support is needed for new buildings.

In Austria, 85% of farms on tie stalls could consider stopping their activity and abandoning farms if tie stalls are forbidden (Schermer, 2022). This farm abandonment or conversion could result on an increase of higher yielding breeds with higher feeding needs and a consequent reduction of pasture use and thus increased loss of open areas and forest regrowth, loss of biodiversity and radical socio-economic changes and subsequent declining of population in those rural areas.

Animal welfare is a key component of fair, healthy and sustainable food system. Animal welfare is a wicked problem because does not have a unique definition (evolves with knowledge and perception), is a complex system, multifactorial, and therefore with not a single (solution are context-based) or perfect solution (solution are better or worse, not true, or false).

A transition from permanent tie-stalls to more open system that allow more freedom to move is welcome. However, according to the presenter, a simple ban of tie stall systems with access to pasture in mountain areas would:

- not improve the overall welfare of dairy cows (there is no evidence that cows in tie stall system with access to pasture have an overall lower level of welfare compared to cows in loose housing with zero grazing).
- reduce the provision of traditional products and other ecosystem services (landscape management, biodiversity conservation, vitality of rural communities)

### **Questions and discussion**

The subgroup asked about the reason behind the need to tether cows in Mountain areas. It was explained that in addition to the lack of space (i.e., flat land) it is not easy to change to a loose system in those areas because sometimes barns are in the middle of a village. Additionally, to change to a loose system farmers should decrease the number of animals, but often this number is already very low (sometimes around 5 animals), and farmers have a tiny margin in their business; 50 cows could be an appropriate threshold for requiring switching to another system (open system, etc.).

The issue of not enough energy for cows going outside and consequent lower production was raised as an element to consider against a compulsory access to pasture for tie-stalls farms. The problem of competition for land particularly in mountain areas, as it is not always easy to find land around the farm and long displacement of cows to access pasture are not always possible, was also highlighted. The subgroup considered that the problem of access to pasture is a combination of infrastructure, management and feeding, and that small farms have difficulties to afford costs and need financial support for making those investments. However, it was also underlined that in Sweden, small farms usually give more access to pasture than big farms, and often more than required. Consequently, the difficulty to access pasture by small farms cannot be generalised, and helping in transition should apply to all farms, not only to small ones.

It was stressed that permanent tethering can never be considered good for animal welfare, particularly when considering freedom of movement and expressing natural behaviour and cannot be accepted. In Austria and Italy, the market is strongly pushing for a transition, and alternatives for small farms have been found. Examples of some of these alternatives for conversion of Austrian farms were

provided<sup>1</sup> during the meeting. Those solutions need financial support and decisions to act but are possible.

### 5. Presentation on “Pasture for dairy cows” (Sweden)

A new **animal welfare act based on ‘natural behaviour’** was adopted establishing that cows both tethered and loose housing shall be kept in pasture during summer. Traditional keeping of cows in Sweden include pasture. This is important for the health and welfare of cows, especially in tethered systems.

According to the Swedish Animal Welfare Ordinance, cattle older than six months kept for milk production shall be kept in pasture in the summer. Cattle older than six months, other than cattle kept for milk production, shall be kept in pasture, or allowed access to outdoor areas in the summer in some other way. These provisions do not apply for animals in quarantine.

Animal Welfare Regulations have changed over time and made more flexible for the farmer. Currently, cows shall be on pasture at least 6 hours a day during specific periods of the year depending to the geographic area:

- South of Sweden: 120 days (1 April- 31 October)
- Middle of Sweden: 90 days (1 April- 31 October)
- North of Sweden: 60 days (1 May- 1 October)

Some **reviews of scientific** literature have been carried out and G. Arnott et al.2016 conclude the following:

- Cows on pasture-based systems have lower levels of lameness, hoof pathologies, hock lesions, mastitis, uterine disease, and mortality compared to cows on continuously housed systems.
- Pasture access also have benefits on dairy cow behaviour, in terms of grazing, improved lying/resting times, and lower levels of aggression.
- Moreover, when given the choice between pasture and indoor housing, cows show an overall preference for pasture, particularly at night.
- Potential areas for concern within pasture-based systems include physiological indicators of more severe negative energy balance, and in some situations, the potential for compromised welfare with exposure to unpredictable weather conditions.

In summary, the results from this review highlight that there remain considerable animal welfare benefits from incorporating pasture access into dairy production systems.

#### **Cost and debate:**

- In 2014, the cost of the access to pasture was estimated at 1 000 - 1 200 SEK per cow and year. Cost differs between farms, and it is mainly linked to yield reduction (≈3%) and cost of driving streets. However, it is difficult to calculate the price of pros in health and welfare because significant differences among farms.
- Pasture is a symbol for animal welfare in Sweden. Frequently debated, farm organisations ask for more flexibility today.

#### **Pros and Cons:**

- Pros:

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<sup>1</sup> [https://oekl-bauen.at/dateien/EIP/EIP\\_Bauen.pdf](https://oekl-bauen.at/dateien/EIP/EIP_Bauen.pdf)

- Allow for natural and social behaviours (cows want to graze),
- Longevity and general health
  - A cow on pasture moves 4-8 kilometres per day, a cow indoors- 400-800 m per day.
  - Improved mobility, muscles, blood circulation, legs and hoofs, mastitis, uterine health.
  - Less antimicrobial use.
- Cons:
  - Parasites.
  - Less milk production.
  - May be difficult to arrange access to pasture for a large production.

### Questions and discussion

No limit of stock density in pasture is laid down in the Swedish legislation.

The subgroup identified feed efficiency and gas emissions as the main problems linked to having cows on pasture:

- Feed efficiency: feed cannot be controlled in grazing and need further adjustment if resulting in less milk. However, improvement in health and longevity lead to more years of milk production and could compensate.
- Ammonia emissions are easier to manage inside than outdoors.

It was explained that while in Poland having cows outdoor is a challenge particularly for big farms, which are not well accepted by the population (particularly due to the gas emissions), in Ireland housing systems are primarily based on a 3-4-month housing period with the rest of the year at pasture. Ireland has no specific legislation on dairy cows' space allowance and pasture, but dairy production has increased in the last years and become more intensive. Ireland is considering having further legislation specifically for dairy production. Ireland made available an application<sup>2</sup> to help dairy farmers to calculate common grazing related equations - cows, paddock, days in paddock, kgDM (kg dry matter) and square meter allocation, cow, kgDM/cow/day, cover, etc.

In Denmark, compulsory access to pasture was not required because needs significant investments on roads and access; asking for improvement inside buildings was preferred. However, the consequence is that structures become bigger and bigger.

The subgroup believes that grazing is a cow natural behaviour, and systems like those in Ireland based on pasture must be promoted. However, those system might be difficult to implement in some countries where land is not easily available. The advantage of having mixed breeds which do not require feed supplementation and have a better welfare was emphasised. These breeds produce less milk, but of better quality.

The importance of changing the welfare assessment measure, by using ABM (animal-based measures) to measure animal welfare indoors and in pasture was also pointed out.

Proportion between farms with access to pasture and zero grazing varies very among countries, with no grazing and only concrete yards in Malta because no land available, around 40% of Austrian farms

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<sup>2</sup> <https://www.grazingcalculator.com/>



with access to pasture and the rest with zero grazing and permanent access to a concrete out-area (4-5 m<sup>2</sup>/cow) in loose systems, and a very high % of farms with access to pasture in Ireland.

In Italy, there are big differences between plains (mainly no grazing) and mountains (common grazing). Discussions are taking place in Italy on the number of days (at least 60-70 days in a year depending on the type of animals), with 500 m<sup>2</sup>/adult cow, with shelter.

The choice between pasture and zero grazing systems is mainly driven by management concerns, often linked with ammonia production and a dilemma between environmental and animal welfare considerations.

The subgroup considered difficult to estimate the appropriate transition periods for big changes in infrastructure, as they are linked to socio-economic considerations. A transition period of 20 years corresponding to the depreciation of buildings could be a possibility.

## **6. Calendar for the next meetings**

**15 December 2022, 9:30 – 12:30**

Standard operating procedures

**23 January 2023, 14:30 – 17:30**

Health of dairy cows

**7 February 2023, 9:30 – 17:00**

Wrap-up meeting (physical)