Question raised by requestor
What are the current practices in Member States regarding the space allowance for dairy cows?

Answer

In addition to Q2E-Ruminants-Equines-2023-002 (https://doi.org/10.5281/zenodo.7875294) we provide a nonexhaustive list of legally non-binding recommendations for France, Germany and Italy.

## Legally non-binding recommendations

## France

The French Institute for Applied Research and Development in the Field of Livestock (IDELE) gives the following recommendations (1):

There are two main configurations in straw-bedded group-housing systems without cubicles:

1. The straw-bedded pen with a combined feeding/exercise area
a. Size of the feeding/exercise area: as the feeding area is merged with the exercise area, two cows should be able to pass each other without interfering with each other and passing behind a cow standing at the headlock. The feeding/exercise area should therefore be 4 to 5 m wide. With one feed fence space per cow (approximately 0.75 m ), this results in a useable area of 3 to $3.5 \mathrm{~m}^{2}$ per dairy cow.
b. Size of the straw-bedded area: for the lying area, a surface area of 6 to $8 \mathrm{~m}^{2}$ per cow is recommended for large dairy breeds (Prim'Holstein, Normande, Montbéliarde). For smaller breeds, the recommended area can be reduced to 5-6 $\mathrm{m}^{2}$ per cow. These recommended areas are defined by the following generic formula:

$$
\text { Area/animal }\left(\mathrm{m}^{2}\right)=\frac{\text { Useable area of living space }\left(\mathrm{m}^{2}\right)(1)}{\text { Maximum number of animals to be housed (2) }}
$$

(1) After deduction of areas that cannot be used by the animals (presence of posts, racks, etc.) or that are soiled (around drinking troughs, parlour exits, steps, etc.)
(2) Take as a basis the maximum number of animals that can be present at the same time in the stall.

The rectangular lying area, with a maximum width of 9 to 12 metres and accessible along its entire length, ensures smooth animal movement, limits disturbance to those lying down and allows for a good distribution of animals. A width of 11 to 12 m is increasingly used in case of a potential conversion into cubicles. It is recommended that the floor of the straw bed be slightly sloped to facilitate the evacuation of fluids (slope of 2 to $3 \%$ ).
$\rightarrow$ Between 8 and $11.5 \mathrm{~m}^{2}$ per cow is recommended depending on several factors.
2. The integral straw bed with feeding platform, sometimes installed for dry cows and heifers, or even cows in production.
a. This type of building is more suited to dry feeding and short stabling periods (less than 100 to 120 days per year). To keep the cows clean, a bedding area of at least $10 \mathrm{~m}^{2}$ per animal is recommended. A $1.80-2.00 \mathrm{~m}$ raised feeding area with a $2-3 \%$ slope towards the straw bed will improve comfort and cleanliness at the trough.

In loose housing with individual cubicles: many recommendations on the number of cubicles (maximum number of cows), cubicle partitions, the size of cubicles, the floor of the cubicles and the size of corridors and passageways. No recommendation on total space allowance per cow.

Furthermore, there are recommendations published by regional chambers of agriculture.

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## Germany

In the federal state of Lower Saxony legally non-binding guidelines are published (e.g., cubicle dimensions, aisles, outdoor run, feeding space, tie-stall dimensions) (2).

Italy
In Italy, 6-7 $\mathrm{m}^{2}$ per head is the minimum requirement in the Classy-farm protocols, based on an indoor lying area, or at least one cubicle per cow (with a range of $+/-10 \%$ of the mean number of cows) (3).

## References

1. Institut de l'Élevage. Des vaches laitières en bonne santé. Moins d'antibiotiques avec de bonnes pratiques d'élevage et des bâtiments adaptés. $2017 . \quad$ https://idele.fr/rmtbatice/?eID=cmis download\&oID=workspace\%3A\%2F\%2FSpacesStore\%2Fcf493566-1f93-4a8c-a4c486af65437359\&cHash=32dbba5af61ba62f2b40787ef4bb49ad
2. Niedersächsisches Landesamt für Verbraucherschutz und Lebensmittelsicherheit. Niedersächsische Tierschutzleitlinien zur Milchkuhhaltung.
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3. EU Platform on Animal Welfare, Thematic sub-group on the welfare of calves and dairy cows. 7. Meeting of the sub-group on calves and dairy cows. 2022. https://food.ec.europa.eu/system/files/2023-02/aw platform 20221017 sub-cows min.pdf

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