



Why is space allowance a significant resource-based indicator?

- High stocking density, i.e. not enough space per animal to allow for normal behaviour can result in an inability to lay down and rest with adverse effects on pigs' welfare.
- The combination of high ambient temperatures and high rate of humidity and insufficient space to lie down is a risk factor for hyperthermia and can lead to circulatory problems and death.
- High stocking densities can hinder pigs from reaching drinkers.
- Pay special attention to sows – they are more vulnerable towards heat stress than slaughter pigs, and sow-sow fights may be severe.



Legal requirements



Council Regulation (EC) **No 1099/2009**: Requirements associated with space allowance and thermal control: {Annex III, Point 2.1.}: general provisions for space allowance in lairage pens. {Chapter II, Article 3, Point 2.a}: provision of physical and thermal comfort.

Note: Listed requirements are paraphrasing the literal text of the regulation and are not comprehensive. Moreover, there might be stricter national legislation in place. For a more detailed description on the specific requirements, see the "[Review on arrival and lairage management at pig slaughterhouses](#)" and on "[Climate control and space allowance during transport of pigs](#)".

Inspection method (recommended)

- The inspector assesses **space allowance** in lairage pens.
- The inspector assesses number of pigs in lairage pen and measures space.
- In case of infringements, the inspector reports findings to Business Operators and/or Animal Welfare Officers.
- In cases of infringements, the inspector verifies the SOPs of the slaughterhouse and corrective actions are carried out to ensure the situation complies with legal requirements in the future.

When is space allowance adequate?

Pigs lying in half recumbency simultaneously in lairage pens indicates that space allowance is adequate. During high ambient temperatures, pigs should be allowed to lie in lateral recumbency simultaneously, due to their thermoregulatory behaviour.

If pigs have enough space can be estimated by calculating floor area occupied by lying in different positions after a formula from Ekkel et al. (2003):

- **Lateral position: area = 0.047 x W^{0.66}**
- **Half recumbent position: area = 0.033 x W^{0.66}**
- **Sternal position: area = 0.019 x W^{0.66}**

Ekkel, E.D., Spolder, H.A.M., Hulsege, I., Hopster, H., 2003. Lying characteristics as determinants for space requirements in pigs. Applied Animal Behaviour Science 80: 19-30

During the course of the visit the assessor will count the total number of animals inside the pen and will measure the space allowance of the pen. Doing so, the assessor should measure the length, width and height of each lairage pen.

Space allowance is calculated as m² per animal.

Sufficient space allowance in a lairage pen



Insufficient space allowance in a lairage pen



Source scoring method: adapted from the Welfare Quality® protocol



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