# Protocol - stable climate

Management and documentation on stable climate is relying on the type and brand of ventilation system used. In facilities for pig research it is essential to gather, handle and analyse the information available.

## Standardized documentation per stable section

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| --- | --- |
| Period (start and end date (DDMMYY)) |  |
| Stable section ID |  |
| Section type (Dry sow, Farrowing, Weaner, Growing/Finishing) |  |
| Number of pens with pigs in the section |  |
| Number of pigs in the section |  |
| Type of ventilation system (e.g. suppress, neutral, natural or forced) |  |
| Thermometer: type, brand, model, accuracy |  |
| Hygrometer: type, brand, model, accuracy |  |

**Ventilation settings**

The following guidelines are given by the dutch Klimaatplatform Varkenshouderij (<https://www.wur.nl/nl/show/klimaatplatforms-varkens-en-pluimveehouderij.htm>). The minimum ventilation standards are based on a maximum CO2 concentration of 3000 ppm, measuring the pigs at rest. Remember these are only guidelines. The ideal temperature is highly dependent, among other things, on the ventilation system (i.e. type/size of air inlets), floor characteristics, animal behaviour, health status and feed intake of the pigs. It may be that due to specific operating conditions, other settings are necessary.

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| **Pig category** | **Min. Ventilation per pig (m3/h)** | **Max. Ventilation per pig (m3/h)** | **Ventilation target temperature (ºC)** |
| Weaned sows | 18 | 150 | 20 |
| Pregnant sows | 25 | 150 | 20 |
| Farrowing sows before farrowing # | 25 | 250 | 20 |
| Farrowing sows at the time of farrowing # | 25 | 250 | 23 |
| Lactating sows a week after farrowing # | 35 | 250 | 20\* |
| Lactating sows end of lactation period # | 60 | 250 | 20\* |
| Piglets at weaning (7,5kg)# | 3 | 12 | 26\*\* |
| Weaned pigelts day 21 # | 6 | 18 | 24 |
| Weaned piglets day 42 (25 kg) | 8 | 25 | 20 |
| Finisher pigs day 1 (25 kg) | 6 | 40 | 25 |
| Finisher pigs day 5 | 8 | 40 | 22 |
| Finisher pigs day 50 | 14 | 80 | 20 |
| Finisher pigs day 100 | 17 | 80 | 19 |
| \* When using a solid floor with floor heating. With a fully slatted floor or a solid floor without floor heating, set temperature 2°C higher.  \*\* If the piglet lying area is covered, the initial ventilation temperature can be set 2°C lower, depending on the design of the covered area. | | | |
| # Piglet lamp on; Target temperature in piglet nest at piglet height: day 1: 33-35°C; day 7: 29-31°C, day 25: 23-26°C  Relative humidity should be keept between 40 and 70% for all pigs. | | | |

**Lighting program**

* Lightning on time (HHMM):
* Minimum illuminance in lux:
* Lightning off time (HHMM):
* Night light available – yes/no:
* Minimum illuminance for night lights in lux:

**Heat sources for piglets**

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| --- | --- | --- |
|  | On (DDMMYY): | Off: (DDMMYY): |
| Heat lamp |  |  |
| Radiant heating |  |  |
| Floor heating |  |  |

**Cooling system**

Describe if relevant:

## Standardized documentation of stable climate

Once per day (at the same time of the day every day) during the test period. For temp and relative humidity (RH%): current value and minimum and maximum the last 24 hours. Manual changes in ventilation settings during the last 24 hours – yes or no, specify changes in textbox below.

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Date and time (DDMMYY) (HHMM)** | Temp | Min Temp | Max temp | RH% | Min RH% | Max RH% | Changes in vent. settings |
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Specification of ventilation settings (or add as attachment):

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| --- | --- | --- | --- |
| **Pig category** | **Min. Ventilation per pig (m3/h)** | **Max. Ventilation per pig (m3/h)** | **Ventilation target temperature** |
| Weaned sows |  |  |  |
| Pregnant sows |  |  |  |
| Farrowing sows before farrowing # |  |  |  |
| Farrowing sows at the time of farrowing # |  |  |  |
| Lactating sows a week after farrowing # |  |  |  |
| Lactating sows end of lactation period # |  |  |  |
| Piglets at weaning ( kg) |  |  |  |
| Weaned pigelts day 21 ( kg) |  |  |  |
| Weaned piglets day 42 ( kg) |  |  |  |
| Finisher pigs day 1 ( kg) |  |  |  |
| Finisher pigs day 5 |  |  |  |
| Finisher pigs day 50 |  |  |  |
| Finisher pigs day 100 |  |  |  |
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