

Improved health, welfare and viability in young pigs: general information and legislation

Description

Newborn piglets are highly sensitive to low ambient temperatures and delayed or insufficient intake of colostrum. These factors contribute to high levels of piglet mortality, in both, indoor and outdoor herds (13 to 40 % mortality, depending on the type of farm and management). Underlying causes are large litter sizes due to the use of conventional breeds with low birth weights, low level of human intervention, poor design of farrowing pens, lack of micro-climate control, and reduced possibilities to cross-foster. After the neonatal period, the most common health disorders for organic piglets are diarrhoea, anaemia and parasitic infections. The POWER project evaluates the efficacy of several types of action to reduce piglet mortality and health problems: improved management of sows and farrowing pen design for optimised maternal and piglet behaviour, design and management of piglet nest to improve its use, selection of sows with high potential for piglet survival, alternative solutions for iron supplementation to avoid anaemia, supplementation of probiotics to improve gut health, and a prolonged lactation to improve the robustness and growth of piglets.

Legislation

EU organic Regulations 2018/848 and EU 2020/464 stipulate the following:

- “Organic livestock housing conditions and husbandry practices should (...) ensure a high level of animal welfare” and that “any suffering, pain or distress should be avoided, or should be kept to a minimum at all stages of the animals’ lives”.
- Lactating sows must be housed in pens providing at least 7.5 m² per sow and access to an outdoor area of at least 2.5 m². A “sow must be able to move freely in her pen and her movement shall only be restricted for short periods”.

Applicability box

Theme

Pigs

Farm type

Indoor housing with outdoor run and pasture access

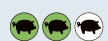
Production stage

Sows + piglets, weaners

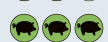
Every measure and tool introduced will be scored according to its impact on animal welfare, CO₂ + NH₃ emissions and finances.



welfare: **no or little** impact



welfare: **positive** impact



welfare: **high positive** impact



environment: **no or little** impact



environment: **positive** impact



environment: **high positive** impact



low costs



medium costs



high costs

- Organic piglets must be fed with maternal milk for a minimum period of 40 days.
- Tail-docking and cutting of teeth shall not be carried out routinely. Physical castration of male neonates is allowed, but only if performed before 7 days of age and with adequate anaesthesia / analgesia.
- The use of feed materials of microbial or mineral origin, and feed additives, is allowed under certain conditions defined in the regulations.



Animals raised outdoors encounter a wide variety of microorganisms and nutrients in the soil and pasture that are useful for their health and absent indoors.

- Regarding the treatment of sick piglets, the regulations stipulate that “phytotherapeutic and homeopathic products shall be used in preference to treatments with chemically synthesised allopathic veterinary medicinal products, including antibiotics”. Apart vaccinations, treatment to prevent suffering at castration, and against parasites, only one chemical allopathic veterinary treatment is authorised in the life of a growing-finishing pig.

Relevance for animal welfare

Beyond the specific points covered by the regulations, the obligation to prevent animals’ suffering, pain or distress of animals implies that efforts must continue to improve the welfare of piglets in organic systems. The actions tested in POWER meet this objective by testing solutions to improve the comfort of piglets, reduce health disorders of piglets and improve piglet survival, that ultimately reduce the suffering associated with disease or agony:

- Genetic selection for piglet survival will reduce the number of dying and suffering neonates.
- The optimisation of the nest design will improve thermal comfort and avoid that piglets suffer from hypothermia.
- Increasing the farrowing area may stimulate maternal behaviour, promote colostrum intake, and thus favour the survival of neonates.
- Improving iron supply during lactation will avoid anaemia and thus contribute to the proper functioning of the immune system of the piglets and prevention of infections.

- Improving the gut microbiota and extending lactation length should result in better gut health and greater gut maturity at weaning. In turn this should prevent gut disorders, that are sources of pain and can even lead to death.

The pros and cons of all these strategies, regarding welfare, environmental and economic impacts are evaluated in the factsheets of this handbook.

Relevance for environmental impact

- The environmental impact of raising a piglet is mainly incurred by rearing and maintaining its mother. These environmental costs hardly increase with a growing number of piglets weaned per litter.
- Therefore, increasing the number of weaned piglets and high weaning weights minimises the impact per kilogram produced.
- Decreasing piglet mortality during lactation will reduce the environmental footprint of each piglet.
- Improving piglet health and viability around weaning contributes to enhanced weight gain and feed efficiency in the growing-finishing stage, and thus to a better environmental footprint of pigs.



After weaning, the most common health disorders for organic piglets are diarrhoea and parasitic infections. For weaners raised outdoors, the environmental conditions may favour contamination by common swine parasites in comparison with indoor rearing. On the other hand, the percentage of weaning diarrhoea is lower outdoors than in organic indoor farms.



The design of farrowing pens is crucial for piglet survival. Space allowance, bars on the walls and a piglet nest can reduce piglet mortality by crushing in free farrowing systems.

Further information

- **EU (2018):** Regulation (EU) 2018/848 on organic production and labelling of organic products. At: eur-lex.europa.eu [Link].
- **EU (2020):** Commission Implementing Regulation (EU) 2020/464 of 26 March 2020 laying down certain rules for the application of Regulation (EU) 2018/848. At: eur-lex.europa.eu [Link].
- **Prunier A. et al. (2014):** Health, welfare and production problems in organic suckling piglets. *Org. Agr.* 4, pp. 107-121 [Link].

Imprint

Publisher:

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Permalinks: orgprints.org → power, projects.au.dk → power

1. Edition 2022 © FiBL



The project "POWER – Proven welfare and resilience in organic pig production" is one of the projects initiated in the framework of Horizon 2020 project CORE Organic Co-fund (<https://projects.au.dk/coreorganiccofund/>) and it is funded by the Funding Bodies being partners of this project (Grant Agreement no. 727495). The opinions expressed and arguments employed in this factsheet do not necessarily reflect the official views of the CORE Organic Co-fund Funding Bodies or the European Commission. They are not responsible for the use which might be made of the information provided in this factsheet.



