

## IMPROVED SUSTAINABILITY IN ORGANIC PIG PRODUCTION

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The local and global sale of organic pork produced in Denmark has increased markedly in recent years. Organic pig production is associated with several positive aspects from a societal point of view e.g. very low use of antibiotics and animals being able to express more of their natural behavior compared to conventional production. However, there are some challenges regarding sustainability that needs to be addressed. In Denmark, organic pig production is based on outdoor sow production all year round while the majority of growing pigs are kept in stables with access to a concrete covered outdoor run. The outdoor production of sows imposes a significant risk of nutrient leaching, especially in paddocks with lactating sows. The outdoor run for growing pigs is associated with high ammonium emissions and causes problems with poor hygiene. Finally, the current practice puts a higher pressure on land resources compared to conventional production due to lower crop yields combined with a poorer feed conversion. There is a need to develop production strategies to improve the sustainability of organic pig production. We investigate whether i) integrated production of energy crops (or other woody vegetation) and free-range pigs, ii) increased nutritional contribution of roughage and direct foraging, and iii) environmental enrichment of the outdoor run for growing pigs are promising developments for organic pig production. Preliminary results from the national project, pEcosystem, and the EU project, Agforward, will be presented.