

# ProPIG



## – Organic pig farmers and researchers working in eight European countries on animal health, welfare and nutrition to reduce environmental impact

The project “ProPIG” analyses the relationship between animal health, welfare and environmental impacts on 75 organic pig farms and the effect of farming systems on those. After development of on-farm assessment protocols a prospective cohort study is carried out across three housing system (outdoor, partly outdoor, indoor with concrete outside run) in eight European countries with the aim to improve the situation.

Organic production is perceived by consumers as being superior in animal welfare and sustainability and the demand for organic pork products is slowly increasing. Within the past ten years a variety of husbandry and management systems have been developed across the EU, ranging

from farms with pigs outdoors all year round using local breeds to farms with housed pigs having concrete outside runs and using conventional breeds (CorePIG, Rousing et al, 2011). So far, mainly clinical parameters have been used to describe the health situation on organic pig farms, identifying some key problems, such as weaning diarrhoea and piglet mortality. Organic pig production is - amongst others - characterised through a holistic approach based on the EU Regulation (EC) No 834/2007 and the IFOAM principles: ‘health, ecology, fairness and care’. This clearly states that health is more than absence of clinical symptoms and, the relation between animals and their environment is identified: ‘Health’ is defined as ‘the wholeness and integrity of



*Project partners evaluate an outdoor farming system in Italy*



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living systems. It is not simply the absence of illness, but the maintenance of physical, mental, social and ecological well-being’ (IFOAM; 2006). Concepts of animal welfare include physical and mental welfare as well as the concept of naturalness (Fraser 2003), which is often interpreted as the ability to perform natural behaviour. Verhoog et al (2003) describe three

main approaches within organic agriculture’s concept of nature and naturalness: the no-chemicals approach, the agro-ecology approach and the integrity approach. Applying those concepts to organic pig production can highlight potential conflicts: outdoor systems are perceived as the optimal housing system for pigs, as they allow natural ▶



behaviour such as rooting. However, this behaviour can cause damage to the grass cover and furthermore the manure fate in outdoor areas needs to be considered. A few studies on outdoor pig production have shown a clear N and P surplus and a high degree of distribution heterogeneity in outdoor areas, increasing the risk of N and P losses (Watson et al. 2003). Robust and competitive organic pig production needs to encompass low environmental impacts and good animal health and welfare. So far few studies have quantified both aspects in different pig husbandry systems. In addition, the theory that improving animal health and welfare reduces environmental impacts through decreased medicine use, improved growth rate and feed conversion efficiency has still to be verified.

The aim of the CORE Organic II project ProPIG (2011-2014; AT, CH, CZ, DE, DK, FR, IT, UK) is to examine the relationship between health, welfare and environmental impact (Leeb, 2011). On-farm assessment protocols are carried out on 75 farms in three

pig husbandry systems (outdoor, partly outdoor, indoor with concrete outside run). Environmental impact is assessed using both Life Cycle Assessment and calculations of nutrient balances at farm and outdoor area level. Animal health and welfare are evaluated from animal based parameters including clinical and selected behavioural parameters. Results are fed back in form of benchmarking and used by farmers to decide farm specific goals and strategies to achieve these goals. As an outcome, all farms created their individual health, welfare and environmental plan, which reviewed in our second project year (on-going at the moment) to allow continuous development.

This provides an opportunity not only to investigate, but also improve the influence of organic pig farming systems on animal welfare and environmental impact. This fulfils the fourth IFOAM principle of care: 'Organic Agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment' (IFOAM, 2006). ■



*The ProPIG partners, Italy 2013*

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