

Animal health and welfare in organic European pig production: State of the art and challenges for the future, based on a North-western European questionnaire survey

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Abstract - Sixty organic pig producers from Denmark, UK, the Netherlands, Germany, and Sweden have completed a questionnaire concerning health and welfare problems in organic sow herds. Half the farmers perceived they had a problem with piglet mortality. The most common cause of death was crushing of piglets by the sow, but also piglets that were weak at birth and shortage of milk in the sow caused problems in many herds. Weaning diarrhoea concerned 25 % of the farmers, mainly in Denmark, Germany and the Netherlands; and respiratory diseases caused problems in 43 % of the farms, especially in the Netherlands. Diarrhoea was the major cause of death in Danish weaned pigs; in the Netherlands they were more likely to die from respiratory diseases, while insufficient feed intake in weaned pigs was a bigger problem than infectious diseases in the UK. Future research should focus on the development of production facilities and monitoring systems, as well as optimisation in feeding, hygiene, and animal handling.¹

INTRODUCTION

Organic pig production is a small-scale system, and various production systems co-exist. Yet, the knowledge of animal health and welfare in existing systems is scarce (Thamsborg et al., 2004).

In a survey among Danish and Swedish farm advisers, leg problems in sows, piglet mortality, and weaning diarrhoea were identified as the most important health and welfare problems in organic sows, suckling piglets and weaned pigs, respectively (Bonde and Sørensen, 2003). The farm advisers ranked potential risk factors for these problems as part of developing a Critical Control Points (CCP) protocol for sow herds (Bonde and Sørensen, 2004).

The farmers' perception of the problems is also important, and therefore we have carried out a survey among organic pig producers from Denmark, Sweden, UK, Germany and the Netherlands. In this survey we have gathered information on the prevalence of health and welfare problems, and the presence of different risk factors on-farm.

MATERIALS AND METHODS

In the summer 2005 organic pig producers from Denmark (DK), England (UK), The Netherlands (NL), Germany (D), and Sweden (S) received a questionnaire with 54 questions concerning their production system and management for sows and pigs, as well as the disease patterns and Salmonella infection in their herds in 2004.

The Danish questionnaire was posted to 20 large sow herds, and 11 farmers completed the questionnaire. The English version was posted to 13 herds that were supplying pork to one organic pork marketing company, and six farmers completed the questionnaire. The Dutch version was posted to 72 herds on a list from the Dutch organic certification programme SKAL. Twenty-five farmers completed the questionnaire, while five farmers replied that they did not have a sow herd. The Swedish version was posted to 22 herds with more than 10 sows, according to the producer list obtained from the Swedish organic certification system KRAV. Eleven farmers completed the questionnaire. We could not get access to any producer lists from Germany; instead questionnaires were forwarded to a group of German organic pig husbandry advisers, resulting in completed questionnaires from seven farms.

RESULTS

Participating farms

In general the 60 participating pig producers had several years experience in organic farming, only five farmers had converted to organic production within the last year, and 53 % of the farms had been organic for 5 years or more. The farmers were also experienced in sow husbandry; 80 % of the farms had housed a sow herd for 10 years or more.

The herd size varied from 10 to 400 sows with an average of 84 sows; 30 % of the herds had 100 sows or more. The Danish herds had an average herd size of 144 sows, followed by NL (94 sows), UK (52 sows), D (51 sows), and S (37 sows). 73 % of the herds were integrated, finishing most of their slaughter pigs themselves. The average age at weaning was lower in D and NL (42 days) than in the other countries (52-54 days).

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The predominant system for dry and lactating sows in DK, UK and S was pasture, while most of the Dutch and German sows were housed indoor with outdoor access. The weaned pigs in DK, D, and NL were housed indoor, mostly with outdoor access. In UK the weaned pigs were on pasture, while the Swedish farmers used both systems.

Leg disorders in sows

Leg problems in sows were frequently observed in 21 % of the herds. The Dutch, German and Swedish farmers seemed more concerned with lameness in their sows compared to the English and Danish farmers. In general, hoof injuries and abscesses were the most frequently observed leg problems in the sows, but leg or hoof disorders were culling reason in only a few cases.

Piglet mortality

In general 55 % of the farmers perceived they had a problem with piglet mortality, and 19 % of the herds, mostly Dutch, reported a piglet mortality of more than 20 % (see Table 1). The most common cause of death was crushing of piglets by the sow. In addition to that, piglets that were weak at birth and shortage of milk in the sow caused piglet mortality in many herds.

Health problems in weaned pigs

As illustrated in Table 2 respiratory diseases were causing most concern, perceived as a problem by 42 % of the farmers, especially from NL. Weaning diarrhoea concerned 25 % of the farmers, mainly in DK, D and NL; 16 % of the herds observed weaning diarrhoea in more than 25 % of their batches of weaned pigs. Arthritis was perceived as a problem by 28 % of the farmers, and endoparasites concerned 20 % of the farmers. Diarrhoea was the major cause of death in Danish weaned pigs, while the Dutch weaned pigs were more likely to die from respiratory diseases. The English farmers reported that insufficient feed intake in weaned pigs caused bigger problems than infectious diseases.

Herd health control

The farmers appreciated optimisation in the care of the animals, and improvements of the production facilities as the methods most likely to improve herd health. Breeding programmes focusing on disease resistance and improved surveillance of the production, using for example a CCP management tool were alternative options. Health advisory plans; better disease treatment, or more robust pig breeds were judged as less effective methods to improve herd health.

Table 1. Piglet mortality in the suckling period

Country	No. herds	Piglet mortality, %				Caused by crushing
		< 5	5-20	21-35	36-50	
DK	11	2	8	1	0	30-80 %
UK	6	1	5	0	0	20-98 %
NL	25	1	17	6	1	10-95 %
S	11	1	9	1	0	50-100 %
D	7	0	5	2	0	20-93 %
Herds, %		8 %	73 %	17 %	2 %	Av. 60 %

Table 2. Farmer concerns about diseases in weaned pigs

	Farmers being concerned about the health problem			
	Diarrhoea	Arthritis	Respiratory diseases	Endoparasites
DK	4 (36 %)	1 (9 %)	3 (27 %)	5 (45 %)
UK	0	0	0	0
NL	6 (25 %)	10 (45 %)	17 (68 %)	4 (18 %)
S	0	2 (20 %)	2 (20 %)	1 (9 %)
D	4 (67 %)	2 (33 %)	2 (33 %)	1 (17 %)
Herds,%	14 (25 %)	15 (28 %)	24 (42 %)	11 (20 %)

DISCUSSION

The Swedish, German and Dutch farmers more frequently observed lame sows in their herds than seen in UK and DK. The Dutch, German and to some extent Swedish sows are housed indoor, which perhaps might lead to more injuries, and on the other hand, indoors or in smaller herds like the Swedish, monitoring of individual animals are easier. Housing on pasture may lead to an under-estimation of the problem caused by difficulties in the surveillance of animals. Better monitoring systems are needed in order to improve animal welfare in organic herds.

The farmers observed different health problems in their weaned pigs. In the UK infectious diseases were less of a problem than in Denmark, Germany and the Netherlands, where weaned pigs are housed indoors. Apart from the differences in housing systems, aspects of hygiene, feeding and the age at weaning might also be partly responsible for the differences observed between the countries.

Research in the development of production facilities better suited to control infectious diseases, as well as optimisation in feeding, hygiene and animal handling in relation to animal health and welfare, is needed. Surveillance of the production by means of e.g. a CCP management tool might be applicable in the control of herd health and product quality. Such a tool is not yet available on-farm but a procedure for developing the tool has been described by e.g. Bonde and Sørensen (2004).

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