

Relation between treatment for arthritis during suckling and performance the during fattening period

SUMMARY

- Piglets treated for arthritis grew slower than healthy pigs
- A greater risk to be attended for lameness during the fattening period if treated during suckling (OR=4.7)
- The negative impact of arthritis can be reduced by proper floor surfaces, since the incidence of arthritis pre-weaning was lower than the national average (2% vs 10%, OR=0.2)
- The somewhat lower incidence of lameness in Hampshire-Yorkshire litters may also indicate a heterosis effect

BACKGROUND

Arthritis in pigs is of major animal welfare concern, but difficult to study as records are needed on individual pigs. This study analysed arthritis and growth performance from birth to slaughter in pigs with documented pedigree.



Figure 1. Piglet Floor[®], Flowcrete Sweden AB, Perstorp, Sweden; Photo: www.flowcrete.com

METHODS

During three and a half year, all 12,744 piglets born at Lövsta, The Swedish Livestock Research Center, Swedish University of Agricultural Sciences were studied. Each pig had an individual identity at birth and have individual records on health and growth performance from birth until slaughter.

In 2012, the research center was rebuilt with a floor adapted to piglets. Piglet Floor[®] is an epoxy free two-component solvent solution with natural quartz. The components were mixed and applied to the cleaned and dry concrete floors of the farrowing pens by certified professionals at a thickness of 2-4 mm.

RESULTS

In total 9,807 piglets were weaned at five weeks of age, and 9,569 were alive at 9 weeks. Of these, 208 (2.2%) had been treated for arthritis.

Table 1. Relationship with period and arthritis at pigs

	Alive at 9 weeks	Treated or lameness during the fattening period	Arthritis recorded at slaughter
Unaffected	n = 9361	n = 28 (0.3%)	n = 30 (0.3%)
With arthritis	n = 208 (2.2%)	n = 3 (1.4%)	n = 2 (1.0%)

The mean birth weight (1.5 kg) did not differ between groups, but the weight at 5 weeks, 9 weeks and the carcass weight were 1.3, 2.4 and 2.3 kg lower in pigs treated for lameness during suckling (P<0.001).

Table 2. Mean weights of piglets treated for arthritis during suckling compared to piglets non attended with lameness

	Unaffected (kg)	Treated for arthritis during suckling (kg)	P
Birth	1.5	1.5	n.s.
5 weeks	11.5	10.2	<0.001
9 weeks	28.9	26.5	<0.001
The carcass weight	83.1	80.8	<0.001

Pre weaning arthritis was recorded in 53 out of 249 (21.3%) pure bred Yorkshire litters compared to in 111 out of 626 (17.7%) Hampshire-Yorkshire litters (P>0.05).



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