

The effect of pen density on piglet welfare and growth

S. Van Beirendonck^a, L. Paepen, A. Bulens^a, J. Van Thielen^{ab}, B. Driessen^a

^aKU Leuven, Kleinhoefstraat 4, 2440 Geel, Belgium

^bThomas More Kempen, Kleinhoefstraat 4, 2440 Geel, Belgium

Introduction

- Maximal pen densities are prescribed by law, but laws are not consistent between different European countries
- Maximal pen densities are not based on maximal zootechnical performance

Material and methods

Experimental design

- Weaner unit: high density (0,24m²/animal) vs low density (0,29m²/animal)
- Finishing unit: same density for all pigs (0,69m²/animal)

Measurements and observations

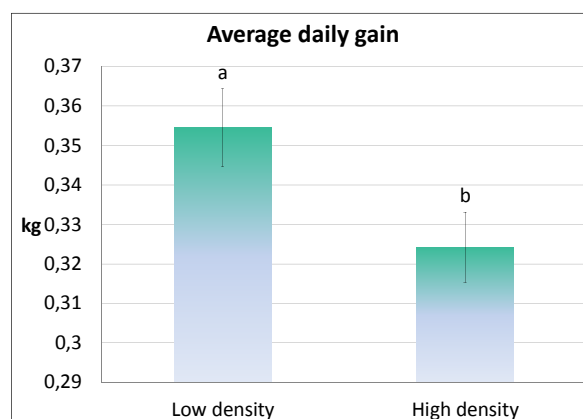
- Pigs were weighed at weaning, at the end of the weaner unit and at the end of the finishing phase
- Behavior was observed and lesions were scored



Results

- Behavior as well as zootechnical performance were influenced by pen density
- These differences disappear again in the fattening phase, when pen density is the same for all pigs

| Behavior (freq/min) | Low density | High density |
|---------------------|----------------------------|----------------------------|
| Tail biting | 0,052 ± 0.011 ^a | 0,125 ± 0.016 ^b |
| Sucking on ears | 0,179 ± 0.024 ^a | 0,279 ± 0.029 ^b |
| Licking | 0,244 ± 0.031 ^a | 0,506 ± 0.052 ^b |
| Playing | 0,254 ± 0.041 ^a | 0,500 ± 0.058 ^b |
| Sniffing | 3,517 ± 0.157 ^a | 4,606 ± 0.174 ^b |
| Chain biting | 0,456 ± 0.030 ^a | 0,990 ± 3.037 ^b |
| Mounting | 0,015 ± 0.005 ^a | 0,115 ± 0.016 ^b |



Conclusion

Lower pen density in the weaner unit positively influences behavior and zootechnical performance of piglets. However, these differences disappear when the lower density is not maintained in the fattening phase.