



7 Research paper

**Reducing Antimicrobial Usage in Pig Production without Jeopardizing Production Parameters** by Postma, M., Vanderhaeghen, W., Sarrazin, S., Maes, D., and J. Dewulf  
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in **Significant Impact Group(s)**: Biosecurity ; Prudent use AB

Species targeted: Pigs;

Age: Young;Adult;

Outcome Parameter(s): Decreased AMU; Improved animal health so less disease and increased production; reduced costs on medicines so economical savings

**Summary:** This study evaluated the extent to which antimicrobial use (AMU) could be reduced in pig production by focusing on herd health, disease prevention and AMU. Their research involved 61 Flemish pig herds and included three visits per herd. During the visits, information was gathered on herd management, biosecurity status using the Biocheck.UGent™ tool, vaccinations, anthelmintic therapy and AMU. This info was then translated into a herd-specific action plan which was discussed with the farmer and veterinarian/advisor during the visits. Significant improvements in biosecurity combined with additional vaccination, anthelmintic therapy and responsible AMU was seen. There was a 52% reduction in AMU in pigs from birth - slaughter. Increased biosecurity and decreased AMU were combined with increased numbers of weaned piglets per sow per year (+1.1), daily weight gain (+5.9 g/day) and mortality in the finisher period (-0.6%). Guided interventions as a team effort between farmer, veterinarians/advisors has shown to be a promising method in the reduction of AMU in pig production.

Antimicrobial usage (AMU) has been described to be high in pig production. Although farmers are aware of the high usage, little is known about intervention to improve the situation. This study evaluated the extent to which AMU could be reduced in pig production by the optimization of herd management, biosecurity status, vaccination strategy, anthelmintic therapy and advice on prudent AMU. Furthermore, the effects of these interventions on the herd production results were explored. This intervention study was conducted on 61 Flemish pig herds and included three visits per herd. During the initial visit, information was gathered on herd management, biosecurity status (quantified by means of the Biocheck.UGent™ risk-based scoring system), vaccination strategy, anthelmintic therapy and AMU. This info was then translated into a herd-specific action plan which was discussed with the farmer and herd veterinarian/other advisors during the second visit. In the final herd visit ( $\pm 8$  months later), comparable data were obtained to evaluate the progress. Overall, a significant improvement of 2.4 points external and 7 points internal biosecurity on the herds was obtained, combined with additional vaccination, anthelmintic therapy and prudent AMU. This was accompanied by a significant reduction in the AMU with a decrease of 52% for the pigs from birth till slaughter and 32% for breeding animals, based on treatment incidences (TIs) and included an important reduction in the use of critically important antimicrobials. More importantly, the increased biosecurity levels and decreased AMU were combined with significantly improved technical results such as the number of weaned piglets per sow per year (+1.1), daily weight gain (+5.9 g/day) and mortality in the finisher period (-0.6%). Guided interventions as a team effort of farmer and herd veterinarian/other advisors have shown to be a promising method in the reduction of AMU in pig production.

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**Where to find the original material:**

<https://onlinelibrary.wiley.com/doi/full/10.1111/zph.12283>; <https://doi.org/10.1111/zph.12283>

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