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TITLE

AN INTERVENTION STUDY TO FOSTER ANTIMICROBIAL USAGE DECREASE IN FARROW-TO-FINISH PIG HERDS THROUGH VETERINARIAN ADVICE

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CONTENT

Background and Objectives: Antimicrobial usage reduction is strongly encouraged in pig production. National dispositive and regulation can support and drive efforts towards a decrease of antimicrobial usage. But to consider farm specific situation and context, diverse alternatives and solution have to be implemented. The objective of this study was to investigate the specific effect of audit and tailored action plans proposed by veterinarians and agreed by farmers on the farm antimicrobial usage and performances.

Material & Methods: In two participating countries (The Netherlands and France), a long lasting intervention study was implemented in 50 farrow-to-finish pig farms between March 2015 and January 2018. A tailor-made intervention was proposed by veterinarian to reduce antimicrobial usage. Data on antimicrobial usage and performance were retrospectively collected for 2014 and regularly collected during the follow-up, as well as information on actions implementation, pertinence and feed-back. Generalized mixed models were applied to take into account repeated measurements in farms, the underlying time trend driven by general context, assessing country and intervention effects.

Results: A high diversity of actions was proposed and implemented in farms (from 1 to 18 different measures per farm) on the different animal categories, with post-weaning and sows being the predominant targets. A significant trend toward a decrease in antimicrobial usage was observed during the studied period ($p=0.001$), the decrease being significantly magnified by the intervention process ($p=0.01$). Performance analyzed, such as mortality in weaners and fatteners were not significantly impacted by the intervention.

Discussion & Conclusion: A significant decrease of antimicrobial usage was observed in the studied farrow-to-finish pig farms between 2014 and 2017. Additional reduction could be significantly achieved through herd-specific various actions implementation without impairment of performances. Combination of general and herd-specific measures advised by veterinarians might allow antimicrobial usage reduction in farrow-to-finish pig farms.