

Quantification, Benchmarking and Stewardship of Veterinary Antimicrobial Usage

First International Conference

27-28 February 2018

ABSTRACTS BOOK

Poster presentations



Antimicrobial usage evolution between 2010, 2013 and 2016 in a group of French pig farms

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Introduction

Monitoring antimicrobial usage in pig farms is a key element of a reduction plan. The objective of this study was to analyse the antimicrobial usage evolution in the same farms between 2010-2013-2016 and to identify the factors of variations.

Material & Methods

The study monitored antimicrobial usage by weight group in 2016 in 33 farrow-to-finish farms in the West of France. The antimicrobial usage had ever been registered twice for 23 of them in 2010 and 2013 and once for 10 of them in 2013. It was quantified by the number of Course Doses per produced pig per year (nCD/pig). Farmers were asked about the factors that could explain the evolution between 2013-2016.

Results

On average, antimicrobial usage significantly decreased over six years (-38%). However, a high variability of individual evolutions was observed: among the 23 farms with three annual data, 43% decreased their use between 2010-2013 (-3 nCD/pig on average) but had a stable use between 2013-2016 (-0,2 nCD/pig). 26% decreased their use between 2010-2013 (-4 nCD/pig on average) and also between 2013-2016 (-2 nCD/pig). 9% increased then decreased their use during the two periods (+4 then -7 nCD/pig). One farm had the opposite trajectory (-9 then +2 nCD/pig) and another always increased its use (+2 then +5 nCD/pig). Among the 33 farms with data in 2013-2016, 36% decreased their use (-2 nCD/pig on average), 39% had a stable use and 24% increased their use (+3 nCD/pig). For sows, suckling piglets and fattening pigs, most of the farms had stable usage between 2013-2016 (Table 1). Only antimicrobial usage for weaned piglets was more frequently reduced. Increases were explained by occurrence of sanitary problems (mainly urogenital, digestive and respiratory problems on sows, piglets and fatteners respectively). Decreases were explained by vaccination, stop of preventive treatments and improvement of herd management.

Discussion & Conclusion

This study highlights the variability of individual trajectories in antimicrobial usage, due to sanitary issues that may be different according to each weight group. It usefully complements the monitoring of average evolution at the country level.

Table 1: Repartition of the 33 farms according to their variation of nCD/pig between 2013 and 2016 for each weight group

Weight groups	Number (and %) of farms concerned		
	Decrease $\geq -0,5$ nCD / pig	Stability]-0,5 ; +0,5[Increase $\geq +0,5$ nCD / pig
Sows	8 (24 %)	16 (48 %)	9 (29 %)
Suckling piglets	5 (15 %)	15 (45 %)	13 (39 %)
Weaned piglets	18 (54 %)	7 (21 %)	8 (24 %)
Fattening pigs	4 (12 %)	27 (82 %)	2 (6 %)