

# Antimicrobial use evolution between 2010 and 2013 in a group of pig farms – trends and drivers

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## Objectives

- to analyze the evolution of antimicrobial use between 2010 and 2013 in the same sample of farms,
- to identify the factors that account for variations in use,
- to assess farmers' perception on these variations.



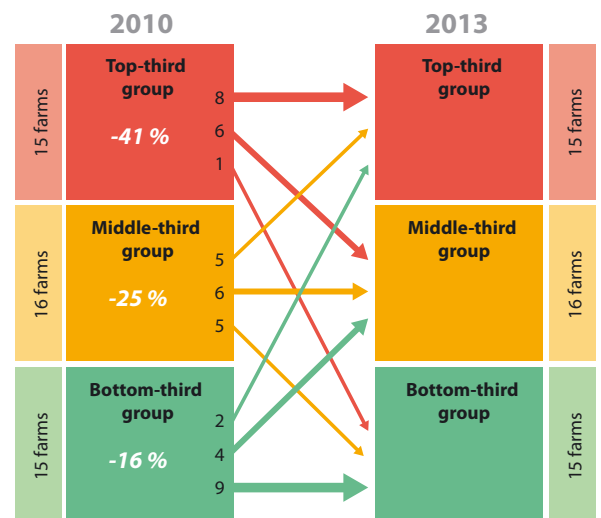
## Material and Methods

- 46 farrow-to-finish farms in western France.
- Quantification of antimicrobial use per weight group in 2010 and 2013. Results expressed as the number of Course Dose (nCD) per produced pig per year.
- Description by farmers of the technical and sanitary changes that occurred in their farm between 2010 and 2013 and that could explain variations in antimicrobial use.
- Comparison between the calculated variation of antimicrobial use over three years and farmers' perception.

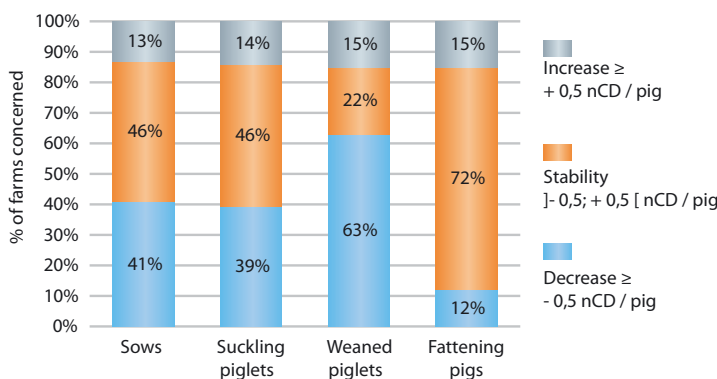
## Results

- Decrease of antimicrobial use over three years was marked (- 31%) and concerned a large majority of farms (74%).
- The decrease in use of antimicrobials was more pronounced in the farms of the top-third group (- 41 %) than in the farms of the bottom-third group (- 16%). Nevertheless, the farms respectively belonging to the top- and the bottom-third categories in 2010 remained largely in the same category in 2013.
- The farmers explained the decrease in antimicrobial use by enhanced disease prevention (improvement in herd management, hygienic and housing conditions, types of feed). Treatments were also optimized (better use of vaccines, de-wormers, alternative products) and some antimicrobial treatments were also reassessed and stopped.
- Some new health problems also resulted in increases of antimicrobial use, but this concerned less than 15 % of farms for each weight group.
- The perception of farmers on their variations in antimicrobial use over three years was incorrect in 60% of cases. Particularly, 49 % of the farmers considered erroneously that the use of antimicrobials on their farm in 2013 was equal to or greater than that in 2010.

Classification of farms into 3 groups, in 2010 and 2013, according to their antimicrobial use



Evolution of antimicrobial use between 2010 and 2013



Mean variation of antimicrobial use per weight group between 2010 and 2013

Weight group	Mean variation of nCD / pig between 2010 and 2013
Sows	-29 %
Suckling piglets	-27%
Weaned piglets	-36%
Fattening pigs	0%

## Conclusion

The marked and frequent decrease in antibiotic use illustrates the collective efforts made over the last years and demonstrates margins of decrease, sometimes substantial, that are achievable in farms. This work also emphasizes the need for farmers of a self-assessment tool of antibiotic usages.

