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TITLE

CONTAMINATION LEVEL OF SYRINGES USED TO ADMINISTER PORCINE VACCINES IN BELGIUM AND THE NETHERLANDS

Sjouke Van Poucke¹, Annelies Michiels¹, Denise Meijer¹, Daniel Angelats², Lorena Nodar²

¹ *HIPRA Benelux*

² *HIPRA*

CONTENT

Background and objectives

Vaccines are produced in a sterile way. Under farm conditions however, they are not administered with sterile disposable syringes. It is likely that the contamination level of syringes influences the efficacy of the administered product and causes injection site reactions/abscesses (Langhoff, 2015). Therefore, the aim of this study was to monitor the contamination level of porcine vaccine syringes in Belgium and the Netherlands.

Material and methods

In total 61 syringes were investigated. Five ml sterile aqua ad iniectabilia was placed on the syringe and collected in a sterile recipient after flushing. Subsequently, bacterial counts at 37°C and yeast/fungi counts were performed after plating the liquids (CFU/ml). A check list with potential risk factors was also completed.

Results

Results were classified as limited, intermediate or heavily contaminated when ≤ 10 , 11-10.000 or > 10.000 CFU/ml respectively were detected. Only 25% of the syringes had a low bacterial contamination, 32% was intermediately contaminated and 43% belonged to the most heavily contaminated group. The fungal/yeast contamination from the least to the heaviest level was detected in 51%, 38% and 11% of the syringes respectively.

Discussion and conclusion

Syringes used in the field to administer porcine vaccines are contaminated to a variable degree with bacteria as well as yeast and/or fungi. Bacterial counts seemed lower when syringes were rinsed and conserved in the fridge. Having a fixed extension increased the chance on fungi or yeast contamination. Overall, more farms need to be included to identify all risk factors and even more challenging will be to find a practical efficient cleaning protocol.