NO EFFECT OF A BIOCIDE ON THE PREVALENCE AND AMOUNT OF LA-MRSA IN A PIG FARM

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CONCLUSION

Even though pigs were exposed twice a week to a mist of an '*in-vitro* efficient MRSA-elimination biocide', the level of MRSA in the pigs and in the environment was not reduced. Once introduced, MRSA seems difficult to eradicate from a pig farm.

Background

Livestock associated MRSA (LA-MRSA) is wide spread in pig herds in most European countries. Most people working in positive pig farms will carry LA-MRSA in their noses. These farm workers may transmit this organism to other people outside the farm premises and thus jeopardize human health, especially in healthcare settings.

Objective

The objective of this trial was to test, if a new biocide (Biovir®) with a good *in vitro* killing effect on MRSA and used extensively in a pig farm could reduce the level of LA-MRSA in the pigs and in the farm environment.

Materials and Methods

The trial was performed in a 700-sow farrow-to-wean unit with an AI-AO flow by room in farrowing crates and nurseries. 9 tests and 9 control groups were run parallel over time. In the test groups, the farrowing crates and the nurseries were disinfected between flows with the biocide, and twice a week for the entire production cycle, the pigs (sows, piglets and weaners) in the 2 compartments were exposed to a mist of the biocide. The amount of MRSA in weaners and the environment at the end of the nursery period was based on culturing MRSA from nasal swabs from 26 pigs (2 per pen) and in air-samples. The productivity in the nurseries was registered.

Results

No significant effect of the biocide was found on the prevalence of positive pigs, or in the level of MRSA in pigs (CFU/swab), or in the environment. The productivity was similar in the control and test groups (average daily gain: P=0.4 and mortality: P=0.8)

RESULTS FROM THE NURSERIES. THE MRSA RESULTS DATE BACK TO WHEN THE PIGS WERE LEAVING THE FACILITIES.

	Control	Test (Biovir®)
Pigs, MRSA positive	84%	85%
Pigs, log (cfu)	2.87	1.75
Airborne, MRSA positive	100%	100%
Airborne, log (cfu)	4.00	2.90
No. of weaners included	3,429	3,591
Average daily gain	462 g	462 g
Mortality	1,6%	1,6%

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