Surveillance of ESBL producing Gram-negative bacteria in four dairy cattle farms in Egypt in 2014

Industrial livestock farming is a possible source for multi-resistant Gram-negative bacteria, including producers of extended spectrum beta lactamases (ESBLs) conferring resistance to 3rd and 4th generation cephalosporins. Little information is currently available about the situation of ESBL producers in livestock farming especially outside of Western Europe. A surveillance study was conducted from January 2014 to May 2014 in four dairy cattle farms in different areas of northern Egypt.

266 samples were taken including rectal swabs from clinically healthy cattle and environmental samples from the stables. After 24 hours of pre-enrichment in buffered peptone water, all samples were screened for ESBL producing Escherichia coli using MacConkey agar supplemented with 1 mg/L cefotaxime.

Detection of the genotype using CarbDetect AS-1 and E. coli PanType AS-2 Kit (ALERE Technologies GmbH)