



107 Research paper

Impact of slurry and manure management on the degradation of antibiotics

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In Significant Impact Groups:

AMU reduction strategies \ Monitoring and surveillance Antibiotic

Species targeted: Pigs;Poultry;Dairy;Beef;Sheep;

Age: Young;Adult;Different for different species;

Summary:

Research shows that the antibiotics most often found in livestock manure are tetracyclines, sulphonamides, macrolides, quinolones and fluoroquinolones. These will later on end up and which end up in the environment. This paper reviews the ways in which antibiotics can be removed during the main possibilities of slurry management: from administration to the animal to the soil after spreading. Animals discharge 30–90% of administered antibiotics unchanged or as active metabolites. During storage, most antibiotics form complexes with soluble organic matter and remain fairly stable. After spreading, soil can have some protective effect. Treatment processes can remove antibiotics, especially composting. Wastewater treatment by activated sludge and anaerobic digestion can also reduce antibiotic contamination. In order to estimate the real risk of resistance, it is still necessary to link these results with the occurrence of resistant bacteria and genes in various compartments (livestock manure, water and soil).

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Where to find the original material:

https://www.ifip.asso.fr/sites/default/files/pdf-documentations/english_version_6.pdf;

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