



Project: Study of the effect of livestock industry biosecurity and hygiene measures on the occurrence and control of antimicrobial resistance

Impact of waste treatment plants on reducing antimicrobial resistant organisms

This study is part of a GB Government-funded research project that the APHA is undertaking, which is supported by Defra, Welsh and Scottish Governments. The objective of the study is to assess the effect of different waste management treatments to minimise the presence of antimicrobial resistant (AMR) bacteria, and antimicrobial resistant genes, in the manure/slurry following treatment.

We plan to visit 20 waste treatment plants to sample farm wastes before and after treatment for the presence of AMR *E. coli*. Plants will be sampled this financial (2023/24), focussing on manure/slurry from dairy cattle and pig farms.

Seven types of sites have been short listed for sampling: mesophilic (35–42°C) Anaerobic Digester (AD) plants with a continuous flow of input material and plants that processes the material in batches, plants with pasteurization step before AD, sites with covered slurry lagoons or tanks and with uncovered lagoons used for storage, farm that treats raw slurry through acidification, and farm that performs composting before spreading.