

## Agricultural use of Bio-solids, Humanure (Sewage Sludge)



Bio-solids (also known as humanure or sewage sludge) is the residue collected after treatment of the contents of urban drainage systems. Although the bulk of the sludge is from human waste, it may contain industrial and food processing effluent as well as run-off water from roads and pavements.

Where sludge is used for agricultural purposes it is necessary to monitor and control both its content and application dose for potentially toxic elements (PTE) so that these PTE's are not passed on through the food chain.

Other unpleasant ingredients, such as pathogenic bacteria, viruses and parasites are substantially reduced by the biological, chemical or heat treatment processes used on the sludge with any remaining hazard being significantly reduced by the effects of the weather and the micro-organisms in the soil.

Sewage sludge is used in agriculture because it contains valuable amounts of nitrogen and phosphorous, both necessary to maintain productive soil as well as organic matter to improve the water retaining capacity and structure of the soil.



Treating farmland with sewage sludge is also strictly controlled with stringent time-lapse requirements between application and use for crops, including animal feed crops and grassland.

### Information is available on the following web sites:

Department for Environment, Food and Rural Affairs (defra)

<http://www.defra.gov.uk/farm/waste/sludge/index.htm>

Environment Agency (EA)

<http://www.environment->

[agency.gov.uk/business/444304/1224648/660279/241420/1387827/1226419/?version=1&lang=\\_e](http://www.environment-agency.gov.uk/business/444304/1224648/660279/241420/1387827/1226419/?version=1&lang=_e)

Environmental Guidance for Small Businesses

[http://www.netregs.gov.uk/netregs/sectors/1029415/1029681/1034816/?lang=\\_e](http://www.netregs.gov.uk/netregs/sectors/1029415/1029681/1034816/?lang=_e)

Sevenoaks District Council, Environmental Health - Environmental Protection Team

<http://www.sevenoaks.gov.uk/> e mail [environmental.protection@sevenoaks.gov.uk](mailto:environmental.protection@sevenoaks.gov.uk)

The Sludge (Use in Agriculture) Regulations 1989 SI 1989 No. 1263

[http://www.opsi.gov.uk/si/si1989/Uksi\\_19891263\\_en\\_1.htm](http://www.opsi.gov.uk/si/si1989/Uksi_19891263_en_1.htm)

The Safe Sludge Matrix – Guidelines for the Application of Sewage Sludge to Agricultural Land

[http://www.adas.co.uk/media\\_files/Publications/SSM.pdf](http://www.adas.co.uk/media_files/Publications/SSM.pdf)

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The Safe Sludge Matrix - Guidelines for the Application of Sewage Sludge to Industrial Crops

[http://www.adas.co.uk/media\\_files/Publications/ASSIC.pdf](http://www.adas.co.uk/media_files/Publications/ASSIC.pdf)

Code of Practice for Agricultural Use of Sewage Sludge

<http://www.defra.gov.uk/environment/water/quality/sewage/sludge-report.pdf>