



factsheet



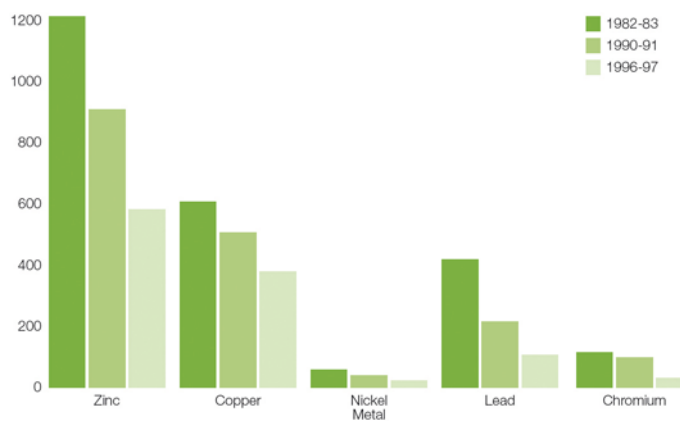
heavy metals/PTEs

Applications of nutri-bio are managed to ensure there are no adverse effects to the soil. Comprehensive aggregated soil samples are taken prior to all applications. nutri-bio is applied to soil at a pH between 5.5 and 7.5, which is consistent with productive agricultural soils in the UK.

Much of the UK's heavy industry has now disappeared and so there has been a very large reduction in the form of heavy metal pollution. Heavy metals are also known as potentially toxic elements or PTEs.

The amounts of heavy metal present in biosolids have reduced due to strict environmental regulations. Mineral phosphate fertilisers contain 75% more cadmium than biosolids because cadmium and phosphates are mined from the same rock. Fertilisers now average 40mg Cd/kg P2O5, whilst the concentration in biosolids would be 23 mg Cd/kg P2O5.

Due to a reduction in heavy metal inputs at source, the concentrations found in biosolids has been very successfully reduced. Levels of cadmium and lead in particular have been dramatically reduced. (see graph below)



(Water UK, Recycling Biosolids to Land)



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Application of Biosolids

Typical numbers of agricultural applications needed to reach the soil limits stipulated in the MAFF Good Agricultural Practice Soil Code range from around 50 applications for copper and zinc at 250kg N/ha to over 900 applications at 170 kg/ha for chromium. Biosolids applications are managed so as not to approach the PTE limits on agricultural land, it would be unlikely that toxicity in crops or livestock would be observed. (FACTS Newsletter February 2000)

nutri-bio will only be spread once a thorough assessment of the soil has been carried out by a field technician and passed as suitable. Therefore, no nutri-bio can be applied unless safe to do so. The nutri-bio product is analysed regularly in order to ensure that the product is compliant with HACCP.

The graph below illustrates the effect of 10 biosolids applications in relation to amounts of PTE's that already exist in the soil, showing very little impact is made.

For further information on Heavy Metals, please log onto the Environment Agency's website www.environment-agency.gov.uk

The effect of ten consecutive biosolid applications in relation to statutory limits

