

**BIOAVAILABILITY OF Pb AND Zn IN SEWAGE SLUDGE-TREATED SOILS:
COMPARATIVE STUDY IN ENGLAND AND GREECE**

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Abstract

In order to assess the role of sludge-borne organic matter and ambient temperature in Pb and Zn availability to ryegrass (*Lolium perenne* L.) comparative field experiments were conducted in England (Sonning Farm) and Greece (Vardates). Three rates of sewage sludge (0, 10 and 50 t ha⁻¹) were applied in the plots. Lead and Zn concentrations in the ryegrass and the soil organic matter content were monitored over one year after the addition of the sludge. At Sonning Farm organic matter did not decline until Week 32 from the commencement of the experiment. During that time, the metal concentrations in the ryegrass did not change significantly, probably because organic matter kept the metals bound in the solid phase. In Vardates, Zn concentrations in the ryegrass had a two-fold increase at 50 t ha⁻¹ from the first to the second cutting.

Key words: Organic matter, temperature, heavy metals.