

ENVIRONMENTAL POLLUTION

EDITOR-IN-CHIEF

W.J. Manning

ASSOCIATE EDITORS

K.E. Havens S.V. Krupa K.C. Jones

J. W. Erisman

ENVIRONMENTAL POLLUTION

CONTENTS—Continued from outside back cover

85 Bound residues: environmental solution or future problem?

D. Barraclough, T. Kearney, A. Croxford

The long-term risk of bound residues from mutiple sources is not clear and should be investigated.

Research papers

91 A chamberless field exposure system for ozone enrichment of short vegetation

M. Erbs, A. Fangmeier

The set-up and the performance of an advanced chamberless exposure system applying different ozone treatments and a high number of replicates are presented.

103 Comparison of the method of diffusive gels in thin films with conventional extraction techniques for evaluating zinc accumulation in plants and isopods

M. Koster, L. Reijnders, N.R. van Oost, W.J.G.M. Peijnenburg

The newly developed method of diffusive gels in Thin films (DGT) does not have an added value over conventional extraction techniques in predicting zinc uptake by plants and isopods.

117 The removal of heavy metals in urban runoff by sorption on mulch

A. Jang, Y. Seo, P.L. Bishop

Hardwood bark had the best physicochemical properties for adsorption of metal ions.

129 Arsenic levels in the soils and macrophytes of the 'Entremuros' after the Aznalcóllar mine spill M.A. Taggart, M. Carlisle, D.J. Pain, R. Williams, D. Green, D. Osborn, A.A. Meharg

Arsenic associated with iron plaque on macrophyte roots may pose an ecotoxicological risk to certain herbivores.

139 Results and evaluation of the first study of organochlorine contaminants (PCDDs, PCDFs, PCBs and DDTs), heavy metals and metalloids in birds from Baja California, México

B. Jiménez, R. Rodríguez-Estrella, R. Merino, G. Gómez, L. Rivera, M. José González, E. Abad, J. Rivera

The first data on contaminants in birds from Baia California is given.

147 Occurrence of gaseous and particulate polycyclic aromatic hydrocarbons in the urban atmosphere: study of sources and ambient temperature effect on the gas/particle concentration and distribution
M. Tsapakis, E.G. Stephanou

Ambient PAH partitioning between gas and particle phases vary between compounds and with environmental conditions.

157 Deposition velocities to Sorbus aria, Acer campestre, Populus deltoides × trichocarpa 'Beaupré', Pinus nigra and × Cupressocyparis leylandii for coarse, fine and ultra-fine particles in the urban environment P.H. Freer-Smith, K.P. Beckett, G. Taylor

At two sites the fluxes of particles and aerosols to trees are shown to be greater when aerodynamic diameters are less than 1.0 μ m (ultra-fines) than for larger pollutant and naturally occurring particulates (Dp > 2 μ m).

169 Circulation of copper in the biotic compartments of a freshwater dammed reservoir I. Vinot, J.C. Pihan

This study points out bioavailability, bioaccumulation, biotransference and long-term toxicity of copper in the food chain of a freshwater ecosystem.

ENVIRONMENTAL POLLUTION

www.elsevier.com/locate/envpol

CONTENTS

Volume 133 Number 1 2005

SPECIAL ISSUE SECTION

Organic compounds in the soil environment: formation, potential for re-mobilisation and environmental significance of bound residues

- 1 Introductory remarks to the Special Issue K.T. Semple, K.C. Jones, A. Craven
- 3 Dedication to the memory of Professor Allan Walker 1994–2004 K.T. Semple, K.C. Jones, A. Craven
- 5 Pesticide persistence and bound residues in soil—regulatory significance A. Craven, S. Hoy

European regulations and approaches to the issues of pesticide soil persistence and bound residues are discussed.

11 Soils as filter and buffer for pesticides—experimental concepts to understand soil functions P. Burauel, F. Baßmann

Binding and remobilisation of pesticides in the plough layers are strongly linked with the turnover of organic matter.

17 Formation and release of non-extractable ¹⁴C-Dicamba residues in soil under sterile and non-sterile regimes B. Gevao, K.C. Jones, K.T. Semple

Microorganisms are demonstrated to have a role in the formation and remobilisation of bound residues.

25 Formation of non-extractable pesticide residues: observations on compound differences, measurement and regulatory issues
C.J. Mordaunt, B. Gevao, K.C. Jones, K.T. Semple

The contrasting behaviour of pesticides, with respect to their extractability and bound residue formation, is highlighted.

35 Characterization of non-extractable residues of the fungicide dithianon in soil using ¹³C/¹⁴C-labelling techniques U. Wanner, F. Führ, A.A. deGraaf, P. Burauel

Soil organic matter plays a major role in the formation of non-extractable pesticide residues.

43 Influence of ageing of residues on the availability of herbicides for leaching A. Walker, M.S. Rodriguez-Cruz, M.J. Mitchell

Ageing of herbicide residues leads to reduced losses by leaching.

53 Influence of plants on the chemical extractability and biodegradability of 2,4-dichlorophenol in soil T.K. Boucard, R.D. Bardgett, K.C. Jones, K.T. Semple

This paper describes the changes in availability of 2,4-dichlorophenol in plant amended soils over time.

63 Influence of the amendment of corn straw on the degradation behaviour of the fungicide dithianon in soil U. Wanner, F. Führ, P. Burauel

Agricultural harvest residues enhance the degradation of pesticide residues in soils.

71 Principles of microbial PAH-degradation in soil A.R. Johnsen, L.Y. Wick, H. Harms

Hydrophobicity and soild water distribution ratios influence the interaction between PAHs and soil organic matter, thereby affecting microbial degradation.