

# Risk assessment of pesticide off-site movement – Towards best practice

Prof. Christoph Hinz, Dr Gavan McGrath and A/Prof. Louise Barton

The application of pesticides to manage urban, natural and agricultural land and its vegetation is done routinely. Despite best efforts, pesticides are transported away from where they are applied and move through the environment. Understanding the fate of these chemicals in the environment and in particular where and when off-site pesticide migration occur, will improve our ability to manage the risks.

The UWA Turf Research Program in conjunction with the School of Earth and Environment, at the University of Western Australia, will present a workshop detailing the latest science and recent developments in pesticide fate, risk assessment and regulations. The workshop will be organised in the form of three presentations interspersed with questions and discussion:

- Recent developments of pesticide regulation in Australia and overseas.
- Summary of processes contributing to the fate of pesticide in the environment.
- Introduction to methods for monitoring pesticide fate and their use for risk assessment.

**Who:** The workshop is targeted at turfgrass managers, including those working in local government.

**When:** 10 am – 12 pm,  
Wednesday 14<sup>th</sup> July 2010

**Where:** Agriculture Lecture Theatre  
The University of Western  
Australia  
Hackett Drive, Crawley

**Parking:** Freely available on campus on this date. **ONLY** park in yellow marked student bays at Hackett Entrances 2, 3 and 4. Please do not park in yellow or blue marked bay, as you will receive a fine.

**RSVP:** 7<sup>th</sup> July 2010  
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## Biographies

Prof. Hinz has worked for several years on methodological aspects of pesticide retention, degradation and isotope fractionation for risk assessment as well as heavy metal release from sediments and soils. In addition he has been conducting research on the mobilisation of fines in soils leading to pore clogging, hard-setting behaviour of soils after reconstruction of soil profiles, erosion susceptibility of mine rock dump and regolith materials. This work also relates to his research investigating how physical soil properties constrain root growth in systems and how root growth affects hydraulic properties of soils leading to theoretical development of models to quantify feedback loops between soil hydrology and vegetation.

Dr Gavan McGrath conducts research in the areas of soil physics and hydrology. His research to date has largely focussed on processes at or near the soil surface as driven by climate. These include understanding how the structure of rainfall impacts the risk of pesticide transport to streams and groundwater, as well as nitrous oxide emissions from soil to the atmosphere. In collaboration with Prof. Hinz he has developed new tools to predict the variability of the retention and rapid transport of pesticides. These tools are currently transforming how pesticide risk is being researched in Europe.

A/Prof. Louise joined The University of Western Australia Turf Research Program in 2001, and co-leads it with Professor Tim Colmer. Her current turfgrass research interests include investigating the effects of irrigation and fertiliser management on nitrogen leaching from turf, turfgrass water use efficiency, and management techniques for overcoming soil hydrophobicity. In other field-based research, Louise is also investigating the contribution of agricultural grain production to greenhouse gas emissions.