

Conference Report - International Advances in Pesticide Application - Oxford, 8-10 January 2014

The latest "International Advances in Pesticide Application" conference organised by The Association of Applied Biologists was held at the Oxford Spire Four Pillars Hotel in Oxford, 8-10 January 2014. Despite closed roads, due to flooding, delegates enjoyed a full programme covering an extensive range of topics, from the use of unmanned aerial vehicles (UAV), precision application, orchard sprayers, application of treated seed, spray drift, human exposure to pesticides and to characterisation of spray nozzles. Many papers covered aspects of European projects.

Legislation aimed at reducing pesticide input recognises a need for innovative application techniques in integrated pest management (IPM) programmes being considered within the PURE project (<http://www.pure-ipm.eu>). This emphasised the need for more research if the ideal use of biopesticides and other control techniques can be integrated in economic sustainable farming systems that will maintain food production. Similarly, much more attention has now been given to human exposure to plant protection products so several papers covered the development of models to estimate potential exposure to operators, bystanders, residents and those who harvest treated crops as part of the BROWSE project.

Aspects of spray drift covered orchard spraying with assessment of the impact of airflows on droplet spectra, aerial spraying and development of a means of sampling droplets in the field using a new Phase Doppler Interferometer (PDI) instrument. As field assessments of spray drift are expensive, a new more rapid method of assessing potential drift from air-assisted sprayers was described. Drift reduction especially with targeted herbicide application in row crops was illustrated by a new inter-row band sprayer that utilises GPS and vision guidance to maintain accuracy at higher forward speeds. Problems associated with dust emissions when sowing treated seed became evident with death of bees in Southern Europe. Dust particles from seed containing chemical treatments behave quite differently to spray droplets due to their size and shape, but equipment to prevent the particles being released into the air now includes development of a cyclone system that captures in excess of 99% of dust put through a drill.

All the papers presented at the conferences, as well as the posters, have been published in full colour in *Aspects of Applied Biology* **122**, available from the AAB Office.

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Delegates awaiting the next speaker at the International Advances in Pesticide Application conference

