

**Current and Planned RESEARCH Activities  
in the Area of Pesticide Spray/Dust Drift  
for inclusion on [www.oecd.org/env/spraydrift](http://www.oecd.org/env/spraydrift)**

Information provided by: Andrew Gerber, Professor, Department of Mechanical Engineering, University of New Brunswick, Canada

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<b>Title of research project/activity</b>	<b>Combined Full-Physics Aircraft Wake and Atmospheric Modelling of Droplet Deposition</b>
<b>Area of work</b> (predictive models; field or wind tunnel research, etc.)	Polydispersed multiphase flow, atmospheric flow, forest management, computational fluid dynamics, parallel processing, droplet dispersion, aircraft wake modelling
<b>Summary description of project/work</b> (please write about a 5-10 line summary)	Objective is to apply a CFD based unsteady physical model for droplet deposition (for aerial application of forestry pesticides) which takes advantage of next generation compact manycore parallel processing capabilities. Sub-objectives are: 1a) LES atmospheric boundary layer modelling, 1b) RANS aircraft wake modelling and 1c) combined atmospheric LES and aircraft wake RANS modelling. The resulting unified RANS/LES model will at first provide the opportunity to scrutinize and augment aspects of the AGDISP pesticide drift prediction utility.
<b>Schedule / Anticipated date for completion or availability of results</b>	Research activities (4 graduate students) result in two intermediate reports due approximately September 2013 and two final reports September 2016.
<b>Name of researcher and organization</b> (please specify country)	Professors Andrew Gerber and Gordon Holloway, PhD student Ian Mcleod, University of New Brunswick, NB, Canada Gerry Cormier, Forest Protection Limited, Fredericton, NB, Canada
<b>Contact information</b> (email address)	Andrew Gerber <a href="mailto:agerber@unb.ca">agerber@unb.ca</a> Gordon Holloway <a href="mailto:holloway@unb.ca">holloway@unb.ca</a> Ian McLeod <a href="mailto:imcleod.unb@gmail.com">imcleod.unb@gmail.com</a> Gerry Cormier <a href="mailto:GCormier@forestprotectionlimited.com">GCormier@forestprotectionlimited.com</a>
<b>Website URL</b> (if available)	