

NATIONAL WORKING PARTY ON PESTICIDE APPLICATIONS

Chair's Quarterly Report - January 2014

The NWPPA is working to bring a national, coordinated, technical approach to spray drift issues. I believe that has been acknowledged and recognised by stakeholders.

Our vision is that the regulatory system is science based and recognises the use of drift reduction technologies, better education and practice to enable the use of smaller, practical buffer zones.

Meeting of the NWPPA Executive Committee

The NWPPA Executive Committee met in Canberra on Thursday 28 November 2013. The meeting gave members the opportunity to hear, first hand, progress on the Australian Pesticides and Veterinary Medicines Authority (APVMA) review of the Spray Drift Policy, to meet with Ms Trysh Stone, who has recently taken up the position of Assistant Secretary, Livestock Industries and Ag Vet Chemicals Branch in the Australian Government Department of Agriculture, and to receive updates on current NWPPA research projects.

The AVMA Review

Mr Dave Rumbold, was recently seconded from the Victorian Department of Environment and Primary Industries, as the APVMA Spray Drift Policy Review Project Officer. Mr Rumbold, gave a presentation on proposed framework and processes for the APAMA's Spray Drift Review. It provided a good opportunity for NWPPA Executive Committee members to provide him with feedback on the Review process.

This presentation was part of Mr Rumbold's consultation with industry, state and territories prior to the intended release of a public Consultation Paper in the first quarter of 2014.

APVMA plans to make a policy revision announcement in mid-2014 and facilitate implementation of the policy in late 2014 and 2015. The Executive Committee will continue to work closely with APVMA through the course of the review process. The Executive had agreed that the NWPPA should continue its work until the review's implementation is completed.

Mr Nicholas Woods, from the NWPPA Secretariat, presented an update on the Working Party's projects to the inaugural meeting of the government Spray Drift Implementation Working Group (SDIWG) when it convened in Canberra in early December 2013.

Department of Agriculture

Ms Stone provided the Executive Committee a brief introduction of her portfolio and answered questions. She indicated the Department's desire to remove 'red tape', improve access to chemicals for food and fibre production and a renewed commitment to improving Australia's system for Minor Use Registration of pesticides. The Chair and Mr Woods provided Ms Stone with a detailed briefing on the NWPPA work in early January 2014.

For further information on any of the initiatives reported in this newsletter please contact: **Gavan Cattanach**, Chair, NWPPA gcattanach@jta.com.au; **Nicholas Woods**, NWPPA Secretariat, nwoods@phau.com.au



Proposed Agricultural and Veterinary Chemicals Legislation Amendments

At the meeting in early January, Ms Stone informed us that the Australian Government is seeking comments on its proposed Amendment Bill. These amendments aim to reform the approval, registration and review of agvet chemicals to improve effectiveness of the regulatory system and reduce inefficiencies at the APVMA, making processes more predictable, clearer and less unwieldy for industry. The draft Bill is available at www.daff.gov.au/agvet and comments close on Friday 7 March 2014.

First-principles review of the APVMA's cost recovery arrangements

Also of relevance to NWPPA members is the current comprehensive first-principles review of the cost recovery arrangements for the APVMA. This review will examine and recommend options to strengthen the financial sustainability, transparency and accountability of the APVMA's cost recovery arrangements. The review is focused on the structure of the APVMA's cost recovery framework.

Stakeholders are invited to provide submissions to the Department of Agriculture by 21 February 2014. Further details can be found at: www.daff.gov.au/agriculture-food/ag-vet-chemicals/first-principles-review-of-the-apvmas-cost-recovery-arrangements

Communication Strategy

As a number of projects are nearing completion, the Executive Committee is mindful of the need to ensure that the results are available for all those who need them. To this end the Executive Committee agreed a Communication Strategy. As part of that Strategy, a website will be developed in early 2014. We will advise you when it is operational and you will be able to assess it through www.nwppa.net.au. The Communication

Strategy, along with other NWPPA outputs, will be available on this site.

PROGRESS ON PROJECTS

Technical Working Group

As noted in the last Newsletter the work of Technical Working Group (TWG) is at the heart of the current program by currently reviewing available data that would support a new technical approach to the spray drift assessment of pesticides that would meet the needs of the NWPPA and regulators.

The TWG is working to present a technical model for consideration by the NWPPA within the same timeframe as the APVMA review (see above).

The TWG has commissioned and endorsed a new series of field and wind tunnel studies, currently being completed by the University of Queensland, which will be used to test and verify possible alternate spray drift risk assessment methods. Spray drift measurements are being made in the wind tunnel under exactly the same application and environmental conditions experienced in the field.



Figure 1 Drift measurement in low speed wind tunnel (UQ)



A successful outcome would see the adoption of a new nationally agreed process for the assessment of drift reduction technologies (DRTs) that could recognise grower best management practice, facilitate rapid assessment of DRTs by the regulatory system and make use of practical operational downwind buffer distances.

Assessment of drift reduction technologies

Project 1 is a three year research project being undertaken by the University of Queensland to determine the effectiveness of different DRTs and chemicals using a specialised wind tunnel facility located at Gatton.

This work is designed to support the development of a system that will enable both industry and regulators to assess ground and aerial sprayer DRTs in a time efficient, science based and transparent framework.

The work is developing a new technical database (accommodating nozzles, formulations and adjuvants) that will support the use of DRTs for the application of pesticides using both aerial and ground equipment.

Some 1,340 measurements covering dozens of nozzle types and mostly glyphosate, paraquat and 2,4-D formulations have been carried out so far. The data has been screened and regression models are under development for AI and XR nozzles. Additional physical property measurements are underway. It is likely that this work will allow development of predictive models and Smartphone 'Apps' later in 2014.

A process has been established by the NWPPA for interested stakeholders to nominate DRTs for inclusion in this program. For more information please contact the NWPPA secretariat at Plant Health Australia.

Education and training

In 2011–12 the NWPPA commissioned a report that reviewed the current professional development and training framework.

The review has shown that in Australia the impact of industry pesticide training programs has had outstanding positive impact on the competency of growers and applicators but that opportunities also exist to enhance current programs to support the recognition of DRTs and best management practice.

The Education and Training Sub-committee of the NWPPA is currently reviewing the comments received from stakeholders on the consultant's report and it is expected that NWPPA will formally release this report in early 2014.

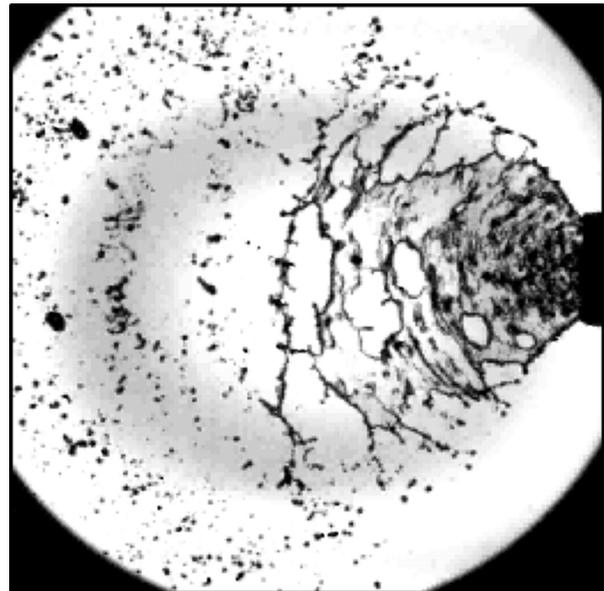


Figure 2 Droplet formation at nozzle tip (UQ)

Assessing DRTs and improving coverage in horticulture and viticulture

A 5-year project to investigate the use of DRTs in viticulture facilitated by the Grape and Wine Research Development Corporation (GWRDC) and endorsed by the NWPPA is now underway.



The project is examining the effect of droplet size, volume rate, the use of targeted air and enhanced spreading with formulation chemistry on spray coverage efficacy and spray drift management.

In particular, the research on vineyard spraying is:

- examining efficacy (through uniform, optimized coverage) but without drift exposure or loss to the ground through excessive runoff
- determining baseline reference sprayer performance against which DRTs can be compared
- using wind tunnel facilities to screen for nozzles and adjuvants and then testing the best systems in the field.

Current DRTs under investigation include:

- targeted air
- alternative sprayers; electrostatics and recapture-recycle sprayers
- single versus multi-row sprayers
- current sprayer adjustments; optimized air volume, direction, velocity and turbulence
- droplet size optimization; adjuvants, nozzles, etc.



Figure 3 Pesticide application trials - viticulture (UQ)

The findings from this project will significantly contribute to the NWPPA knowledge base in the area of performance of spray drift mitigating technologies in broad acre, horticulture and viticulture industries.

The project will focus upon DRTs for buffer zone minimisation and the evaluation of distance-based calibration for optimised dose delivery.

Management of surface temperature inversions

The management of spray drift also requires growers to have an appreciation of the influence of weather parameters. It has long been recognised that the application of agricultural sprays can be influenced by the stability of the atmosphere.

The NWPPA has endorsed a project to investigate the feasibility of using data from automatic weather stations to predict and detect the presence of surface temperature inversions.

The project being conducted by Graeme Tepper and Warwick Grace is planning to test a system that can provide alerts and specific forecasts in regional areas for growers and applicators when conditions are not optimal for spray application.

In collaboration with the Department of Agriculture and Food WA (DAFWA), five sites for instrumented towers have been chosen and instrumentation has been ordered. DAFWA will oversee installation during January 2014.

DAFWA are modifying current systems to ingest and archive the data for subsequent analysis.

Test runs of the model have accurately determined local-wind flow regimes associated with the diurnal variance of atmospheric stability. Detail down to about 100m has been achieved.



The members of the current NWWPA Executive Committee who are guiding the work of NWPPA in 2013–14 are presented below. I would like to take this opportunity to thank Ben Stapley, (CropLife Australia) for his contribution to the NWPPA over the last couple of years and wish him well in his new endeavours in Melbourne.

Gavan Cattanach

Chair, NWPPA

2013/14 NWPPA Executive Committee	
Gavan Cattanach	Independent Chair
Pete Mailler	Grain Producers of Australia
Colin Sharpe	Dow AgroSciences
Alistair James	Croplife Australia
Jorg Kitt	Nufarm
Ken Young	GRDC
Keith Hayes	GWRDC
Jodi Pedrana	HAL
Jolyon Burnett	Australian Macadamia Society
Trevor Ranford	Horticulture Industries
Joe Murrell	Australian Groundsprayers Association
Melanie Gengos	Farmoz
Matt Kealley	Canegrowers
Phil Hurst	AAAA
Ross Gillies	HVP Plantations
Michael Schaeffer	Auschem Training Vic

