SUBMISSION TO THE APVMA ON THE SPRAY DRIFT RISK ASSESSMENT AND RISK MANAGEMENT PAPER:

“OPERATING PRINCIPLES AND PROPOSED REGISTRATION REQUIREMENTS IN RELATION TO SPRAY DRIFT RISK, 24 JULY 2006”

6 October 2006
1. EXECUTIVE SUMMARY

CropLife Australia, the peak body representing the plant science industry, welcomes the opportunity to respond to the APVMA’s draft proposal on spray drift risk assessment and risk management.

Spray drift risk management is important to protect human health, the environment and Australia’s international trade. CropLife is keen to work with government policy and regulatory authorities, as well as industry, to minimise the risk of harm occurring and to promote the responsible use of pesticides.

CropLife Australia broadly supports the APVMA’s proposals as set out in the draft paper and believes that these and other current initiatives will greatly alleviate the problem of spray drift risk. Crucial to managing this risk is the ability of state and territory authorities to ensure compliance of pesticide users with control of use legislation and regulations.

CropLife is concerned that the proposals will require registrants to devote considerable resources to conducting risk assessments and generating new data on efficacy of coarser droplet spectra for each product. The impact of the proposals will need to be addressed in a Regulatory Impact Statement and CropLife expects to submit final comments after members have carefully considered the resource impacts on their businesses and the industry.

Data protection is required for any new study data submitted to the APVMA, but this raises the question of how the APVMA proposes to make labels of similar products consistent.

CropLife would be pleased to provide any additional information as may be required by the APVMA.
2. **OVERVIEW**

- CropLife Australia members recognise the need for some regulatory changes and prescriptive label instructions to reduce the risk of spray drift, particularly for higher risk products, but require continued flexibility to allow user discretion in choosing appropriate application methods to suit local conditions and optimise efficacy.

- CropLife appreciates the fact that the proposals leave the APVMA free to include improved technology in the future, both on spray equipment and drift modelling. Labels therefore should be no more prescriptive than necessary to minimise spray drift risk, whilst allowing flexibility in application.

- CropLife members recognise their responsibilities for product stewardship and wish to continue to provide appropriate technical support in product development and application technology in order to minimise spray drift risk, and ensure sustainable use of products.

- The proposals will require registrants to devote considerable resources to the risk assessments for each product. Much of the risk assessment data required will be specific to Australian conditions, and significant changes will be required, especially with old labels.

- CropLife members look forward to the release of a Regulatory Impact Statement on the proposed regulatory changes and to assessing the impact that this may have on their businesses.

- CropLife will welcome an opportunity to submit final comments after the Regulatory Impact Statement is released to stakeholders. Therefore, these comments may not be the final CropLife response to the APVMA’s spray drift risk assessment and risk management proposals.
3. SPECIFIC COMMENTS ON THE TEXT

(Numbers below indicate the relevant section and page(s) in the APVMA paper)

III. Purpose and Scope
C. Timing (P. 7)

• CropLife Australia requests that the APVMA adopt an appropriate phase-in period, so that these changes can be picked up with other changes to data and labelling requirements.

• CropLife requests that the APVMA recognise that considerable research is required to verify the efficacy of products using coarser droplets and registrants will need considerable time to complete this work. The field research for each product will need to be conducted over several seasons, so generating data on many product will take many years and could be impeded by drought or other adverse conditions.

• At the same time, risk mitigation measures should be applied to similar products or groups of products so as to prevent any commercial advantage or disadvantage to particular companies.

IV. Definition of Spray Drift (P. 8)

• Paragraph 1: “surface inversion” should be “surface temperature inversion”.

• Add to end of paragraph 2: “However, the formulation and final tank mix of an applied product can have a significant affect on droplet spectrum and thus the resultant spray drift profile.”

VI. General Application Concerns
A. Ground application (P. 11)

Paragraph 2: “surface inversion” should be “surface temperature inversion”.

B. Aerial application (P. 11)

• Paragraph 1: “Wake disturbances to the air from large and necessarily fast moving aircraft CAN also contribute to spray drift....”.

• CropLife is concerned that the continued application of some products (e.g, sulfonyl ureas) through aircraft may be deemed unacceptable and this may place further hardship on farmers.
C. Expertise of applicators
1. The Importance of Training (P. 12)

CropLife supports increased training and accreditation for spray applicators.

2. Where Basic Competence Needs Additional Support (P. 13)

The State powers of prosecution raise the issue of liability for the registrant when spray drift damage occurs after the applicator has followed all directions on the label. It is impossible for the label to cover every situation where spray drift might occur, so the liability must still rest with the applicator. The label can only be a guide for best practice.

VII. How the APVMA Estimates the Amount of Spray Drift
A. Assessing the Quantity of a Chemical Likely to Drift – The Role of Computer Modelling
1. The AgDRIFT Spray Drift Model (Pp. 15-16)

- Paragraph 5 on page 16 refers to the use of orchard air blast scenarios in preference to the ground boom spray scenario for predicting spray drift from ground spray applications. The orchard air blast scenario would provide a gross overestimate of the potential spray drift generated from tractor mounted ground boom spraying equipment. Use of the orchard air blast scenario to model spray drift in situations outside orchard use patterns is considered to be a prohibitively conservative approach. The "Tier 1 Ground" scenario is considered appropriate and preferred for non orchard spray use patterns.

- The description of the spray drift modelling method employed for ground application on page 16 appears to be contradicted by paragraph 3 on page 24, where the document states that Tier 1 Ground modelling in AgDRIFT is used to address tractor mounted boom spray application scenarios.

B. The Role of Field Data (P. 17)

Addition to paragraph 2: “...a study of this type that meets adequate standards for scientific validity is very costly. Wind tunnel spray drift / atomization studies offer a cheaper, quicker alternative. The APVMA will need to satisfy itself...”.

Although CropLife acknowledges that large scale spray drift field trials can be complex and expensive to undertake, high quality information on the spray drift performance of boom sprayer nozzle systems can be determined in low speed wind tunnels for relatively low cost. Accurate assessment can now be obtained of the vertical and horizontal flux from hydraulic nozzles that takes into account release height, wind speed and formulation effects. Such data can be referenced to the performance of standard ASAE S572 nozzles and used to rank spray drift performance of nozzle systems used on boom sprayers. CropLife recommends that such data (where available) be accepted by the APVMA for contributing to the spray drift assessment of member company products.
C. Assistance to Applicants with Modelling – Standard APVMA Model Output Datasheets (P. 17)

CropLife commends the APVMA on its work to develop and publish standard model output datasheets for typical risk assessment scenarios. This will facilitate registrant consideration of spray drift modelling prior to registration, a process that is necessary and important in the context of understanding whether a new use-pattern or product label may have restrictive statements or prohibitive no-spray zones introduced as part of an APVMA assessment. Restrictive label statements or prohibitive no-spray zones may have strong economic consequences for the proposed use pattern and companies developing new use patterns must understand these in the early stages of the development process.

Publication of standard model output datasheets will raise an issue with the AgDRIFT Spray Drift Task Force over intellectual property rights. Does the APVMA have the right to use and publish the outputs from the Tier III section of the AgDRIFT model?

VIII. Operational Risk Factors and Mitigation Measures that the APVMA Considers
A. Factors Affecting Spray Drift Not Related to the Specific Chemical (P. 18)
1. Droplet Size (Pp. 18-20)
   • It is crucial that any mandatory limitations on spray droplet spectra only be introduced after careful consideration of spray coverage and efficacy.
   • Greatly increasing the water volume applied by farmers to compensate for reduced coverage by large droplet spectra is not an option for farmers in some regions who do not have adequate sources of quality water available, or have to cart water large distances.

(P. 20).
   • CropLife would like to encourage transition to the new ISO standard for spray droplet spectra as a categorization tool for spray quality on product labels. However, we request that the APVMA adopt a reasonable phase-in period to allow nozzle manufacturers an appropriate period of time to develop nozzle classification data and to publish and distribute this data widely. This phase-in period will be crucial to effectively communicating the change in the standard used for spray quality.

   For instance, since the inception of using ASAE Standard S572 on product labels to describe spray quality, many grower-applicators are still unfamiliar with this standard. Company agronomists are often required to "interpret" the spray quality instructions to these growers in "the old language" of a specified VMD or target spray droplet size in terms of microns. To allow this "interpretation" to proceed effectively for the ISO standard, it would be extremely useful to have supporting literature from nozzle manufacturers readily available to company agronomists.

   • CropLife considers that the issue of tank mixes has not been adequately addressed in the discussion paper. The formulation and final tank mix of an applied product can have a significant effect on the droplet spectrum and thus the resultant spray drift profile. Data on droplet spectra and spray drift risk for mixtures of chemicals and adjuvants can be generated relatively easily and quickly in wind tunnels. CropLife suggests that, where appropriate, accurate real data generated using laser diffraction...
systems in controlled environment wind tunnels be accepted by APVMA for modelling and assessment purposes. Actual data (where available) that takes into account nozzle settings, wind speed and formulation effects should be considered the same as, or preferable to, standard water-based ASAE S572 performance curves.

- Standards need to be developed for spray nozzles, with input of spray atomization data. Consultation should include spray nozzle manufacturers and the Kondinin and Birchip groups.

(P. 21).

Paragraph 3: “surface inversion” should be “surface temperature inversion”.

(P. 23).

c. “Surface Inversion Conditions” should be “Surface Temperature Inversion Conditions”.

Same addition in second paragraph.

IX. Information Requirements for Spray Drift Risk Assessment

A. Risk Criteria for Applicants/Registrants to consider (P. 31)

- Definitions are required in this section for terms such as “unusually stable”, “key trading partners”, “tend to accumulate”, “non-target species” and “sensitive aquatic area”.

- Recommendations on labels need to be standardised to avoid confusion in the market place and to ensure that advice on application methods is consistent.

B. What Applicants/Registrants Should Do (P. 32)

Data protection is required for any new study data submitted to the APVMA. If the APVMA requires additional data, there will need to be a call for a formal review, otherwise product-specific label directions for application will be generated that differ from those for other similar products. It is unclear how the APVMA proposes to give data protection on spray drift study data, but keep labels for multiple similar products consistent.