

29 March 2018

Mr Alan Norden
Executive Director - Registration Management & Evaluation
Australian Pesticides and Veterinary Medicines Authority
PO Box 6182
KINGSTON ACT 2604

Email: enquiries@apvma.gov.au

Dear Mr Norden

CropLife is pleased to provide comment on the Australian Pesticides and Veterinary Medicines Authority's (APVMA) proposed approach to spray drift management (the Approach). CropLife is supportive of the APVMA's efforts to update and refine the approach to spray drift management, having advocated since the introduction of the existing approach in March 2010, for buffer zones based on scientific data and evidence, clearer label instructions with increased flexibility and support for the use of drift reduction technologies (DRT).

The proposed range of measures in the Approach will provide significant improvement in the efficiency, flexibility and practicability with which the APVMA assesses the risks associated with spray drift. Concerns, however, remain with the intended implementation of the Approach and its proposed application to assessing spray drift risk associated with ground (boom) spraying, as outlined in greater detail below.

Spray Drift Management Tool

CropLife supports the implementation of the Spray Drift Management Tool (SDMT), which forms Stage 2 of the Approach, to enable refinement of the application of a crop protection product to further minimise the risk of spray drift, whilst maintaining practical buffer zones and application conditions. The APVMA, however, acknowledge that the use of instructions and conditions resulting from use of the SDMT that are not physically part of the approved label may require changes to state control of use legislation. The lack of certainty around the implementation of the SDMT is of significant concern, as many of the refinement options discussed in the Spray Drift Risk Assessment Manual (SDRAM) to mitigate the unnecessarily substantial ground buffer zones are dependent on the adoption of the SDMT for users.

Furthermore, the Approach does not address label requirements for products that may be affected by implementation of the SDMT, prior to its availability to end users. Any reference to the acceptability of the SDMT prior to its availability would, presumably, not be permitted. Consideration should be given to minimising the regulatory burden on product registrants who may need to amend existing product labels to include reference to the SDMT, if or when it is implemented.

Where refinement of the buffer zone using the SDMT returns a buffer zone greater than 300m (ground) or 800m (aerial) (as outlined in Case Study 1), the SDMT should alert the user that the required buffer zone exceeds a validated range of the model and cannot be established. The advice should also instruct the user not to apply the product, if there are bystander, aquatic, pollinator, vegetation or livestock areas within 300/800m downwind.

CropLife proposes that the APVMA issue a standard 'drift management permit' for every product registration assessed under the Approach prior to implementation of the SDMT, which would potentially include all variables relevant to the label such as different wind speeds, deeper water bodies, higher boom and/or aircraft heights, lower application rates where included on the approved label, more coarse nozzles etc. CropLife is keen to work constructively with the APVMA to determine a suitable format.



Retrospective application of the Approach

CropLife is concerned that the Approach is not intended to be applied retrospectively to existing products, perpetuating a substantial failing of the current spray drift risk assessment process. Existing products registered using the current, outdated spray drift risk assessment approach could retain different buffer zones than a new product with the same active constituent. Similarly, products containing novel active constituents may have larger buffer zones applied than existing products registered for the same use patterns. This could stifle the introduction of new, innovative crop protection products into the Australian market, and lead to overuse of older products in certain scenarios, thereby reducing the intended impact of the Approach and contributing to agricultural chemical resistance.

Refinement of the proposed Approach to ground (boom) spray risk

CropLife does not support the proposed ground (boom) sprayer deposition curve without the refinements proposed by the National Working Party on Pesticide Applications (NWPPA) Technical Working Group at the annual meeting held on Friday 23 March 2018. These proposed refinements seek to remove some errors in the AGDISP Ground model, and allow for the determination of buffer zones that are scientifically valid and more reflective of real world use. These refinements include:

- Including an alternate source for droplet size distributions as per the American Society for Agricultural and Biological Engineers (ASABE) S572 reference boundary curves;
- Removal of the swath off-set to reflect ground boom instead of aerial application;
- Selection of Day-Strong for atmospheric stability;
- Boom height reduction to a more field realistic setting; and
- Importantly, incorporate an alternate further field dispersion model.

Contrary to the aim of the Approach to facilitate the adoption of more reasonable buffer zones, without refinement, the Approach will frequently result in increased buffer zones or a coarser droplet size category for applications by ground boom. While these inaccurate and unnecessarily large buffer zone requirements may in some cases be ameliorated by the application of the SDMT by users, it is not certain that this option will ever be made available, and if so, when. In some cases, this may result in a specific use pattern being omitted from the approved product label, as buffer zones may exceed 300m for ground spray or 800m for aerial application. Again, this raises concerns regarding the lack of any retrospective application to the Approach, as existing products may retain uses that would fail to pass the spray drift risk assessment for new products.

The AGDISP ground model may also be vastly overestimating the amount of product being applied to a given area, as it assumes that seven passes of a boom are made. Refinement via the SDMT would allow users to limit the width of the sprayed area to 20, 40 or 60m widths (which equate to 1, 2, or 3 passes). However, given the concerns raised above regarding the uncertainty of the SDMT being made available to users, CropLife is concerned this overestimation of product applied may adversely unnecessarily affect product registration.

Calculation of regulatory acceptable levels

Further clarification is required regarding the calculation and expression of the regulatory acceptable level (RAL). The SDRAM should more clearly articulate how the APVMA calculates the RAL from the formulation endpoint for products containing more than one active constituent. It is unclear whether, in situations where there is a formulation endpoint, the RAL will be converted into an active endpoint based on the active content, as per the current Environmental Risk Assessment (e.g. if an endpoint for an WG containing 50 g a.i./kg (i.e. 5% w/w) is 200 mg/L, the corresponding active endpoint will be 10 mg a.i./L). Finally, it is not clear why single-nozzle application equipment is exempt from the spray drift risk assessment.

Label statements

Given the apparent lack of understanding of atmospheric conditions that result in surface inversions among product users, CropLife recommends extending the proposed label statement to: 'DO NOT apply during surface temperature inversion conditions at the application site. These conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.'



General comments

CropLife is concerned that the proposed data guidelines state that compatibility of non-compulsory tank mixes is a matter for industry stewardship. While CropLife agrees that the compatibility of non-compulsory tank mixes is the responsibility of the product registrant, the use of the term “industry stewardship” incorrectly implies that there is a formal industry stewardship program for management of non-compulsory tank mixes. CropLife proposes that the text is amended to more accurately reflect that the responsibility for management of compatibility of non-compulsory tank mixes resides with registrants.

CropLife is further concerned that the proposed approach to managing non-compulsory tank mixes with DRT formulations may lead to overestimation of risk in some cases or unnecessarily restricting the label in others. In the scenario where a product with DRT properties is commonly mixed with another product without losing its inherent DRT properties, it may be inappropriately conservative to impose the longer buffer zone associated with the tank mix partner. To encourage innovation with regard to reducing spray drift risk, CropLife proposes that the APVMA evaluate the compatibility of non-compulsory tank mixes with DRT formulations from a spray drift perspective at the manufacturer’s request.

The SDRAM contains a number of technical errors. For example, in example 6 for Case Study 1 of the SDMT (page 60), the boom height should be 1m rather than 0.6m and the vegetation area buffer should be 36m rather than 22m. The guidance on how the APVMA calculates combined toxicity using the concentration addition model (pages 20 to 21) incorrectly considers that one active is “diluting” the other in the multicomponent formulation and provides an underestimate of combined toxicity. Presumably, this is carried over from the previous spray drift risk assessment approach, and as such, requires review by the APVMA on a broader level.

CropLife recommends that consideration be given to the following definitions:

- ‘Application site’ and ‘target’ (with respect to boom or release height, noting some of the case studies currently use ‘ground’ instead of target) should be added for improved clarity;
- The reference to ‘experienced chemical users’ in the glossary definition of ‘advisory buffer zone’ (and elsewhere in the SDRAM) should be removed as it is a non-specific term that could cause confusion. ‘Advisory buffer zone’ should also be updated to refer to ‘vegetation areas’ instead of just ‘native vegetation’ to ensure that ‘landscaped gardens’, ‘crops’, etc. are captured. Alternatively, ‘advisory buffer zones’ could be defined as those that are established to be protective of ‘vegetation areas’ or ‘livestock areas’ and may be reduced by implementing additional risk management strategies;
- ‘Agricultural crop’ should be expanded to include ‘fuel’ and ‘medicinal’ production (i.e. any terrestrial plant species grown commercially for food, fibre, fuel or medicinal production etc.) to account for crops such as biofuels and poppies; and
- ‘Boom sprayer’ should be modified to remove the word ‘directly’ to better account for some technologies such as Controlled Droplet Application.

The revision of the APVMA’s approach to spray drift management provides an opportunity to revisit the justification of several crucial parameters and ensure that they accurately reflect Australian conditions. This includes the inaccurate default water body depth of 15 cm. CropLife is cognisant that more accurate and specific water body depth measurements could be refined by the user in the SDMT when it is made available. However, in the interim, this unrealistic and restrictive assumption will be perpetuated, potentially affecting the introduction of novel products or specific use patterns into the Australian market. While we don’t question the validity of the specified distances for bystander areas (20m), natural aquatic areas, pollinator areas and vegetation areas (3m) and livestock areas (100m) over which the Approach averages the levels of deposition across; providing the justification for these distances would improve their scientific credibility.

CropLife recommends that the APVMA commit to and schedule a periodic review of the spray drift management approach. This would comprise of targeted consultation with key stakeholders to ensure the incorporation of new relevant data when available, and the rectification of identified issues, minor adjustments and/or errors on a consistent basis.



In conclusion, CropLife remains committed to supporting the revision of the APVMA's approach to spray drift management and commends the intention of the APVMA to apply more scientifically valid buffer zones, clarify user instructions, increase user flexibility and support the use of DRTs. CropLife is supportive of the Technical Working Group of the National Working Party on Pesticide Applications proposal to address the inaccurate and unnecessarily large buffer zones for ground (boom) spray produced by the Approach.

Without retrospective implementation of the proposed risk assessment measures, the intended impact of the Approach is limited, and may have negative impacts on product choice by users, as well as restrict the introduction of new crop protection product use patterns into the Australian market. The proposed SDMT promises improved flexibility and practical application of crop protection products by users. However, the lack of a firm commitment to implement this long-awaited measure, and reliance on state jurisdictions for its adoption is deeply concerning.

Please do not hesitate to contact me should you require clarification or elaboration in respect to any aspect of this submission.

Yours sincerely

A handwritten signature in black ink, appearing to be "Alastair James", enclosed within a large, loopy oval scribble.

Alastair James
Director of Agricultural Chemical Policy