SUBMISSION

GPA response to the APVMA's proposed approach to spray drift management

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Thank you for the opportunity for Grain Producers Australia to provide a response to the **APVMA's proposed approach to spray drift management.** The grains industry represented by Grain Producers Australia (GPA) represents Australia's broadacre, grain, pulse and oilseed producers at the national level. GPA was created to foster a strong, innovative, profitable, globally competitive and environmentally sustainable grains industry in Australia. The objectives of GPA are to establish a strong independent national advocate for grain producers based on a rigorous and transparent policy development process; engage all sectors of the Australian grains industry to ensure operation of the most efficient and profitable grain supply chain; and facilitate a strategic approach to Research, Development and Extension intended to deliver sound commercial outcomes from industry research.

Feedback on the APVMA's proposed approach to spray drift management

The Australian grains industry through levies paid to the GRDC has made a significant investment in the development improved mechanistic models that have been designed to be used in future regulatory decisions by the APVMA including spray drift and inversion risk management. These models have been or are in development to be used as tools by producers to achieve effective and environmentally outcomes from pesticide use. It is essential that the APVMA utilises these models in their most effective way for prediction of outcomes, not just using them as tools to simplify regulatory decisions on labels, but also for use of these models as a reference tool and use guide on labels for producers to improve industry best practice. Examples of these models include:

- GRDC Project UQ00047 An interim model for buffer zone reduction in pesticide application from ground sprayers Australian Ground Spray Calculator (AGSC)
- GRDC Project UQ00072 - Spray application management (DRT modelling, managing surface-temperature inversions and spray quality effects on herbicide efficacy)
- GRDC Project DAW00231 The study 'Management of spray drift through inversion risk awareness.

GPA in conjunction with other industry stakeholders has developed a Grain Industry Code of Practice[1], which includes farm and chemical safety. GPA is focused on delivering reforms that will eliminate adverse events including spray drift events resulting from poor industry practice. GPA also recognises the role that technology will have in improving awareness of optimal spraying conditions including inversion risk awareness and use of semi-autonomous and autonomous spray technology. With these emerging technologies it will be important for the APVMA to strategically build the foundations to support these technologies through electronic labels and label reference to cloud data based connectivity to drift reduction technology solutions.

[1] http://grainsguide.grainproducers.com.au/safety_

GPA provides the following feedback on APVMA's proposed approach to spray drift management:

1. Methodology used to determine regulatory acceptable levels (RAL's)

GPA supports the proposed APVMA approach to spray drift RALs, GPA has noted the National Working Party for Pesticide Applications (NWPPA) of which GPA is a member and the NWPPA Technical Working Group (TWG) support for the aircraft and vertical spray drift evaluation models. GPA however notes the TWG concern following its review of the proposed APVMA ground models, noting that the revised models appear to overestimate required buffer zones and recommended that the APVMA consider further the approach used in the ground based models before adopting this into stage 1 regulation.

GPA notes that the role of chemical toxicological endpoints in the spray drift models is a key determinant of buffer zones, particularly when considering aquatic risk. While GPA recognises that determination of toxicological endpoints is a separate regulatory process to this review, GPA is aware of the considerable APVMA variation to the determination of these endpoints compared with overseas regulators. There is a need then to also consider what exposure percentile is used in these models. It is unclear at this time as to how this will be determined by the APVMA. This issue requires further discussion outside this review.

2. Standard scenarios and deposition curves that define realistic worst case situations and are used to generate on-label spray drift buffers.

GPA supports the NWPPA TWG recommendation for the APVMA to further consider:

I. Use of droplet size distributions (DSD) for ASAE S572 boundary curves
II. Removal of a swath offset
III. Selection of Day-Strong for atmospheric stability
IV. A reduction of boom height in evaluations from 80 cm to 50 cm
V. Incorporation of alternate further field dispersion model.

It is recommended that the APVMA defer incorporating the ground-based models into stage 1 regulation reforms until the issues raised with this model are resolved. GPA also requests that the APVMA allow more time for the NWPPA to further review and respond to the APVMA in response to the issues raised.

3. Spray drift data guidelines to support the generation of custom deposition curves

When there is industry agreement that all the spray drift deposition models should be finalised, there is clearly potential to generate a set of custom spray deposition curves based on the use of industry best practice DRTs. GPA will work with the GRDC and the APVMA in developing a set of agreed recommended best practice DRT examples that can also be incorporated as case studies in training material and also potentially as reference use cases by registrants on label.

4. On label spray drift instructions

While GPA recognises the need for chemical labels to provide complete guidelines for product use, the almost infinite number of DRT and spray equipment options available to producers and the future need for electronic labels and cloud based systems to support semi-autonomous and autonomous spray control systems requires a 21st century approach to on-label spray drift buffer zone instructions. GPA does not consider a hard copy 19th century hard copy label approach for all potential DRT solutions as a practical way forward for industry. While labels could have 'worst case' buffer zone, suggested DRT solutions as recommended by the chemical registrant should also be included. Labels will require reference to web based, cloud reference solutions for all available DRT options with access to producer spray drift buffer zone calculator tools held by the APVMA.

GPA is aware that there is resistance from state control of use regulators for a cloud data/web based label reference approach. State regulators should recognise that the historical approach to chemical labels is not appropriate today for delivering best practice stewardship outcomes.

It should be recognised that Australia is the world leader in advanced control systems and farm autonomy use. Australia currently has the highest rate of producer adoption of broadacre use of auto steer in the world. It has been recognised that Australia is 8-10 years ahead of key agriculture technology markets including the EU and USA in farm use of advanced precision agriculture and automation systems. Australian regulators and government will not be able to look overseas on how to integrate these new technologies into the regulatory system, as Australia is the world leader in producer adoption and use. Regulators will need to work with producers and technology providers in the industry to develop a uniquely Australian approach to enable the delivery of the productivity, safety and environmental benefits these technologies will deliver to industry.

5. Spray drift risk assessment tool

GPA recognised that there has been significant investment by the Rural Research and Development Corporations (RDCs), particularly GRDC in generating improved spray deposition data sets delivering new science knowledge to manage spray drift risk. The approach the APVMA has taken with the spray drift assessment tool based on this data will provide industry and registrants with greater certainty of regulatory guidelines for determination of buffer zones. When the spray drift risk assessment tools are implemented by the APVMA in determining buffer zones for new and revised label registrations, label instructions should be flexible enough to apply at both proposed stages 1 and 2, including inclusion of reference to future on-line tools. GPA again notes concerns with the revised ground models detailed in point 2 above. This tool should be provided to all industry stakeholders that require access including chemical registrants, spray equipment and controller manufactures and software providers. The terrorism and military risks around access and use of these models should however be carefully managed by the APVMA as this technology is a controlled item under the Defence Trade Controls Act.

6. Spray drift management tool that allows chemical users to refine these realistic worst-case risk assessments based on their own circumstances and recalculate buffer zone distances accordingly

Producer access to spray drift risk assessment tools is essential for the successful outcomes of reducing adverse spray drift events in Australia. There is a need for improved in-field producer access to these tools on both smart phone and tablet devices as well as being integrated into spray system controllers. For models such as spray drift reduction technology (DRT) models, these foundational approved models should ideally be held by the APVMA and made available to registrants, spray management solution providers and industry producers via the web as a reference for best practice use. GPA is concerned that models may only be used as look-up tools, however into the future where automation and digital agriculture technologies will be significant enablers, models will be delivered as on-line tools that can interact with spray controllers and future electronic label guidelines. GPA would like to discuss any concern with legislative bottlenecks for the APVMA in this implementation.

There is significant opportunity for industry investment through RDCs and commercial providers in delivering integrated spray drift risk assessment tool solutions. The APVMA should be open to joint investment models with industry and the commercial sector to deliver APVMA approved systems that integrate these tools and label options into improved digital business decision tools. It is the commercial sector that will ultimately deliver the most effective gateway for producer use of these tools. This approach is foundational to the recently completed Accelerating precision agriculture to decision agriculture project[2], which was financially supported by all 15 RDCs with additional financial support by the Australian Government.

[2] https://www.crdc.com.au/precision-to-decision

7. Interim measures prior to an interactive web based tool being available (stage 2) and legislative requirements to enable off-label spray drift conditions set by the tool to be enforced.

While there has been conservable activity by both industry and the APVMA in developing improved tools for label information in managing spray drift, unfortunately adverse spray drift events continue in Australia. There is an urgent need to get the tools, particularly those leading to improved spray application including DRTs recognised not only for production benefits, but for their environmental and safety benefits. These tools also need to be integrated into revised spray application training programs delivered by commercial training providers, industry and the chemical manufacturers.

GPA is concerned with the delays already experienced with assessment of the GRDC funded spray drift models which have been submitted to the APVMA, and also tabled and discussed at length through the National Working Party for Pesticide Applications. Appropriate use of this model by the APVMA and industry outcomes through application of DRTs by producers should already be in place. GPA is also concerned that outcomes of the spray drift review and consideration of application of this new model in regulatory decisions are not yet in place before the reviews of phenoxy herbicides including 2,4-D have are finalised. It is essential that chemical review regulatory decisions are deferred until full consideration for decision on models submitted are finalised, including the new spray drift and DRT models and tools for use by producers.

GPA will be encouraging registrants of the approximately 50 current product labels affected by previous APVMA spray drift buffer zone assessment to submit a permit application for use of an industry agreed set of prescribed DRTs and resulting revised buffer zones. These permits could then be incorporated onto existing labels by the APVMA as an outcome of the spray drift review process. GPA would like to see an interactive web based tool being available (stage 2) with Federal and State legislative requirements to enable cloud/web based label reference to be available no more than 6 months from APVMA finalisation of the spray drift risk assessment tool. Before finalisation of the assessment tool, the APVMA must fist resolve the outstanding issues in item 2 above as detailed by the NWPPA TWG.

Summary comments

While there has been considerable progress in development of an improved framework assessment to manage spray drift risk, there is still considerable discussion required on the final implementation approach. it is important to recognise that the timing of APVMA implementation of both proposed stage 1 and stage 2 is critical for a successful outcome for communication improved spray application stewardship messages to producers. GPA requests further industry discussion on stage 2 implementation timeframes. Further time is also requested to resolve the NWPPA TWG concerns.

GPA is committed to further discussion with the APVMA to deliver transformational change delivering improved pesticide access, stewardship and use in the Australian agricultural industry. There is commitment from GPA to work cross industry and deliver productivity outcomes to agricultural industries and the Australian economy and community.

If you would like to discuss any of these comments and suggestions further in detail, please contact me on email andrew.weidemann@grainproducers.com.au or 0428 504 544.

Yours sincerely

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