AERIAL APPLICATION ASSOCIATION OF AUSTRALIA LTD.

ABN 13 002 501 886 • ACN 002 501 886

REVIEW OF THE AGVET CHEMICALS REGULATORY SYSTEM

FUTURE REFORM OPPORTUNITIES

AAAA Submission – August 2020

Executive Summary and Recommendations

There are a number of key changes proposed in this detailed submission, however, the following recommendations provide a clear focus on priorities:

1. Remove unfair and unwarranted restrictions on aerial application.

2. Apply the same current standard of requirements for training, licencing, record keeping and other accountability measures for aerial applicators to both ground applicators and agronomists – a level playing field.

3. Remove the requirement to have an overt 'aerial' approval on label and move to outcome-based label language that recognises systems and qualifications not on the physical label (eg AAAA Spraysafe accreditation, use of calculators and models).

4. Work with AAAA to standardise the requirements for registrants to get aerial on label and to provide all registrants with agreed standard label statements for aerial.

5. Establish a single national regulator with responsibility for label approvals and setting national control-of-use regulations.

6. Establish single national regulations for control of use – or at least a national system of *identical* regulations.

7. Establish a system-based approach in the national regulator (or any State chemical regulators) to ensure adequate systems for quality assurance, continuous improvement and consultation and public reporting.

8. Establish within the national regulator a requirement for all decisions to be based on the principle of risk management, be science-driven and informed by strong consultative mechanisms with industry and other experts.

9. Establish within the national regulator – through legislation - a strong commitment to cooperative regulation and improving outcomes through the recognition of industry stewardship programs such as AAAA's Spraysafe and AIMS programs.

10. Establish a national system for application pilot licencing requiring a single licence based on AAAA's Spraysafe accreditation.

11. Establish consistency in labelling for the same active ingredients / situations / uses.

12. Establish a system of permitted flexibility in uses for chemicals in similar situations even where they are not specifically included on labels (as already exists in some States/Territories).

13. Remove the State/Territory focus on labels 'tables of use' and replace it with a regional, cropping or situation approach.

14. Reform the permit system to establish a new permit category for aerial application

15. Establish a relevant system and tools for improved drift management and recognition of Drift Reduction Techniques through the urgent adoption and then improvement of the principles of the NWPPA and APVMA proposed Stage II Drift Management Reforms

16. Establish an industry-based, application expert task force from peak bodies to rewrite the national competencies for chemical application to better reflect essential knowledge and skills.

General Comments

The great failure of Agvet chemicals reviews over the last 20 years has been the lack of action or progress in implementation of meaningful, significant or even modest advances.

A critical contributor to this failure has been the lack of strong government oversight of and accountability for the individual agencies that constitute the national Agvet system.

How to construct this accountability and drive for reform – in addition to establishing the reform needed – should be a central focus for the review team in its recommendations.

AAAA believes a central component of this new drive must be the inclusion of key industry groups in an overarching reform task force to hold agencies accountable for the rapid and complete implementation of Government-agreed reforms.

AAAA believes these reforms should include:

- Legislative and regulatory reform to improve accountability, responsiveness and consistency

- Cultural reform of agencies to focus on outcomes, efficiency and cooperation
- Management reform of agencies to establish critical systems such as continuous improvement, quality assurance and stakeholder engagement
- Establishment of a cooperative regulatory framework to build on industry expertise and existing industry programs
- Removal of APVMA policy of discrimination against aerial application with a new label system to embrace simplicity, flexibility, innovation and competence.

Despite sitting on many committees, attending many 'consultation' forums and engaging in a significant number of reviews, AAAA has seen little progress or even action – if anything, policy and regulation of the aerial application sector within the Agvet system has become even more complex and restrictive over the years – and damaging to the sector and clients for no positive outcome.

At the same time, the environmental performance of the aerial application industry – led and driven by AAAA through programs such as Spraysafe and AIMS (Aerial Improvement Management Systems) - has continued to improve to the point where State/Territory control of use regulators freely accept that aerial application is a very professional sector.

To maintain a policy position where a strongly regulated and accountable aerial application sector is still regarded in policy settings as a 'higher risk application method' is simply a perverse outcome that ignores data and the improvements already made by industry.

It also underpins a fundamental policy misstep where innovation, improvement and sound risk management by aerial application is penalised by over-prescriptive regulation that ignores that the risk are being appropriately managed.

Access to chemicals is critical for aerial application and clients. The current system intentionally discriminates against aerial application and makes it significantly harder for a registrant to attain an on label aerial approval. In many cases it has been reported to AAAA by registrants that they have been actively encouraged by the APVMA to drop aerial uses from labels to speed up approval processes.

AAAA has already offered to APVMA to co-fund an independent review of aerial application approval processes for labels to improve the system and ensure it was fit for purpose - which was initially taken up by the APVMA CEO, but then opposed by senior management to the point where nothing progressed.

The current regulatory regime is simply not 'fit for purpose' by any measure.

This submission spells out some key principles that would lead to a better systems, and identifies some key outcomes that would provide both meaningful reform and useful key performance indicators to see if this reform attempt will be any more impactful than all of those that have failed before.

The extensive Appendixes section of this submission highlights:

- industry efforts to improve the system over the last 20 years
- consistent identification of the same key issues worthy of reform and lack of action
- the lack of stimulus – legislative or otherwise – for APVMA to improve its performance or self-management
- the lack of consistency in control of use across all State/Territory jurisdictions

Guiding Principles

1. Structure and Accountability

From first principles, given Constitutional arrangements, the current structure of a national Agvet regulatory system is unlikely to vary significantly without a significant change in roles between the Commonwealth and the States.

Given the difficulty and unlikelihood of this level of reform, it is worth noting that the problems identified in this submission are not necessarily caused by federal structural failures – but they are often exacerbated by them.

The current national Agvet system could be made to work a lot better if the individual constituent agencies were made to function a lot better – including in terms of integration, consistency and a far stronger focus on efficiency and outcomes.

Clearly, previously failed attempts to recast the current system to focus on these issues have been well-intentioned but they have fundamentally failed to deliver meaningful reform.

For example, the lack of consistent national control of use regulation, training requirements and licencing (including fees – see Appendix 3), and even drift management policy reform have all been identified as problematical and some attempts at reform have been attempted. But nothing meaningful has changed for the chemical user – if anything, it has deteriorated.

Commonwealth Dept of Agriculture

The Commonwealth Department of Agriculture has failed to express any meaningful oversight of APVMA performance or outcomes, or to address the overall failing health of the system or to engage meaningfully with industry groups on these key policy issues.

Any new system may want to consider this performance and whether the Commonwealth Dept of Ag has any meaningful role to play. The Review should not underestimate what change it would take within the Department to play a more significant oversight role – up to and including legislative change.

Culture is at the heart of this issue – but it manifests itself as an almost complete lack of a relationship with key stakeholders. If the Department is to be afforded any ‘overwatch’ role of APVMA, this cultural malaise must be addressed first.

APVMA

Poor governance and oversight arrangements, little transparency and little evidence of timely outcomes or appropriate business systems – such as QA or continuous improvement to drive improvements - are the hallmarks of APVMA over decades. Staff churn, changing policy directions, individual officer opinions and misguided and internally unchallenged decisions - that do not engage with industry until forced to by industry backlash - remain common and recent.

Users of ag chemicals are largely frozen out of the APVMA system as they are not registrants. This is simply untenable and dangerous – often resulting in APVMA having to make significant changes simply because they were not aware of the implications of their decisions. The 24D suspension and then permits provide a salient example of whole sectors being excluded (eg aerial application of cane, forestry and pasture) and then – due to industry representations and research – being added back in to permissible uses.

There is no 'ground-truthing' by APVMA of its systems or outputs or a strong, formalised or ongoing relationship with industry sectors who are key to safe and effective outcomes, perhaps other than through the National Working Party on Pesticide Application (NWPPA) - that is an industry initiative focussed on technical and scientific support of APVMA.

A key challenge for the current review is not only to document the failings of the current system – the system already speaks loudly for itself – but to take forward stakeholder suggestions for improvements and to identify meaningful *actions* for Government that have eluded all previous reviews.

Putting APVMA on a stronger standard systems footing (see below) would be a significant step forward – but must be accompanied by a realignment of culture and performance to be outcome focussed, more in touch with agricultural outcomes and chemical users and to more often seek win-win outcomes.

In addition, the legislative basis that underpins APVMA can be usefully reformed.

As well as reorienting APVMA to be more cooperative and innovative, there are regulatory impediments to it doing its job, perhaps most notably in the permit area – where the types of permits are established in regulation without any concept of what might be useful or supportive for innovation or improvement – especially in aerial application. More detail on AAAA proposed improvements can be found in *Appendix 2 – Permit Review.*

However, in addition to permit reform, consideration should also be given to how APVMA might be forced to improve to deliver different outcomes and whether this significant cultural change through business systems, stakeholder engagement, genuine consultation and a range of other areas would best be delivered through legislative change, management change, staff induction and training, industry interchange or, most likely, a combination of all of these.

State/Territories

The States/Territories form a critical part of the national Agvet system – but despite superficial similarities in regulatory approaches and requirements (eg training, licencing, record keeping, label offences, harm provisions etc) – they are often worlds apart in terms of culture, cooperation, outcomes, education, enforcement approaches and methodologies.

As we have seen in other areas (eg Dangerous Goods, WHS legislation) even where there is model national legislation agreed, the States/Territories seem to remain committed to ensuring they implement them differently.

Despite this, from an industry perspective, a nationally consistent approach would be extremely welcome and would lead to significant practical improvements – especially for those businesses that operate across States/Territory borders, which in aerial application is almost all of them.

However, even where there is heated agreement on a policy outcome target (eg COAG licencing of chemicals users and fees process, National Pilot Licencing Working Group – see Appendix 3) some States/Territories (or perhaps just individuals) seem to take inordinate pleasure in not working towards the common good.

Perhaps key Agvet issues need to be taken forward and agreed at higher levels of government before they are compromised – however, the will and mechanisms to see that happen appear to be missing.

The review team may consider this apparent lack of high level, focussed structure as a key issue to address to get reform happening.

The lack of a formalised and mandatory high-level consultation mechanism between the APVMA and States/Territories seems ludicrous. This was put forward as one reason why the current APVMA proposed Stage II Drift Management Policy reforms had not advanced as industry would have expected.

In addition to the work of the NWPPA, each State/Territory and especially the APVMA should be required to have relevant mechanisms for regular consultation – not only between themselves, but also involving industry.

2. Science Driven, Risk Based Decisions, Informed by Industry Capability

AAAA has consistently backed the need for national and State/Territory Agvet regulators to have the following principles of operation, backed by legislation:

- Science driven
- Risk based
- Informed by industry expertise, knowledge and practical experience
- Systems organised to embed continuous improvement and quality assurance

AAAA does not see any of these principles of operation as controversial or lacking in evidence as to their utility and powerfulness. It does, however, make the absence of these systems of management or formalised engagement with industry even more questionable when they are missing in a regulator.

3. Cooperative Regulation, Meaningful Engagement and Consultation

It is clear from AAAA's experience over many decades of working with government (AAAA was founded in 1958) that cooperative regulation models offer universally superior outcomes to the current system.

AAAA does not question the role of either the APVMA or the States/Territories discharging their responsibilities through reliance on legislation and regulation or their role in being the policeman when required.

However, the complete absence of a capability or framework to enable industry to work better with the various agencies through a stronger cooperative regulation model is an outdated model that is already demonstrating how it cannot keep pace or remain relevant in a rapidly changing world.

As a starting point, recognition of industry led programs is a sensible approach where industry holds the relevant expertise, reach and capabilities for efficient management where government does not.

A good example is the AAAA Spraysafe program that has been recognised by various State/Territory governments since 1985 as the *de facto* national competency standard for aerial application pilots and, consequently, licencing of those pilots.

However, to clearly identify the lack of 'cooperation' in this system, the States/Territories still charge licencing fees to pilots – even after industry has done all of the heavy lifting and the pilots have paid AAAA for the key learning materials and the exams and record keeping – and the agencies contribute zero financial support to this program. And, somewhat predictably, the States/Territories all have different fees for the licences…

Unfortunately, the power of these types of programs is not recognised by agencies in the current Agvet system. An excellent example is the decade long and failed attempt by AAAA to encourage the States/Territories and the Commonwealth Ag Dept to establish a national system for pilot licencing for chemical distribution – rather than each and every State/Territory requiring their own licence. The details of how far this progressed before being ignored are at Appendix 3.

This was – and continues to be - a missed opportunity for cooperative regulation where industry, regulators and the community all benefit.

In the same way other AAAA programs, such as the Professional Pilot Program (the industry's continuing professional development program) and the Aerial Improvement

Management System (AIMS) run without APVMA or State/Territory recognition, despite them representing significant potential for cooperative regulation, improved and ongoing competence, enhanced compliance and QA.

The potential is both unrealised but also unexplored as despite various attempts by AAAA to have these programs further developed or even recognised by agencies, there is simply no appetite or framework for this to happen.

A simple first step would be for higher level discussions – up to agency head or Dept. Secretary and industry CEOs – to explore ways industry and government can work together for the common good within a new framework of cooperative regulation.

4. Encouraging Innovation, Flexibility and Responsiveness

Many of the current APVMA policies and practices lock in *worst* practice and work to the lowest common denominator of (often outdated) industry practice.

The best example is that chemical labels are still assessed on the basis of a range of worse practice assumptions to arrive at buffer zones for drift management – highest wind speed, highest rate etc etc. This is despite whatever industry might actually use in the field – and especially rates of chemical that are *lower* than label permissible maximums.

The fact that for the last decade or longer that APVMA have been happy to sustain this system despite strong urging from AAAA and others for reform indicates how strong the APVMA culture of resistance is even in the light of *better* practices.

AAAA identified this issue two decades ago and has been working – through significant APVMA churn, lack of focus, policy indifference and resistance – to develop a new approach, especially to drift management, that would overturn years of stagnation.

The NWPPA (see https://nwppa.net.au/ for history and policies) has also been working quietly with APVMA to try and develop a more fitting approach and the result is the proposed reform of the APVMA drift management policy – a process that has already taken approximately 11 years – and is yet to deliver meaningful reform.

Many of the long-term reforms industry has been arguing for were included in the 24D permits issued following its suspension in 2018. These issues included recognition of USDA nozzle calculators, use of lower rates of chemicals resulting in lower buffers and variable spray height considerations for aircraft.

However, the principles already in play on the 24D permits have not been expanded to wider chemical labels through a better spray drift management system. See for example: https://apvma.gov.au/node/33726 and Appendix 4 of this submission.

A key measure of the new drift management approach that APVMA has already agreed to is to enable innovation and best practice. But despite both industry support and an expressed

willingness to move forward from APVMA, the agricultural industry is still hamstrung by the 'old' policy.

Closely coupled with this issue is the fact that APVMA has never really considered or effectively answered industry's questions about 'legacy' products that are neither captured by the 'new chemical' processes under a range of increasingly bureaucratic labelling requirements over the years, or have not been subject to 'review' and consequently have older and often far simpler labels.

This is where Government should be looking closely to move to a comprehensive approach to redefining what a label is and how it works – and integrating the use of advice/calculators etc that are not physically mentioned on the label.

A key outcome to move this discussion forward should be a high-level working group to help redesign the Agvet system approach to labelling that is modern and includes:

- label simplification as a key outcome
- label clarity as a key outcome
- use of electronic media
- use of approved reference material not on the physical label
- recognition of industry accreditations that go to competence or systems
- build on a genuinely nationally consistent control-of-use system for issues such as record keeping
- build on an effective national system of training that does not require the label to 'make up' for poor training
- permits appropriate variability of use across similar crops or situations (already available in some States/Territories but not consistent)
- permits buffer assessment based on scientifically relevant information not on label (see APVMA Drift Management Policy Stage II reforms – yet to be delivered)
- focus on relevant agricultural regions or crop or use patterns rather than the current State/Territory table of use (based on the pre-NRA/APVMA State Registrars of Chemicals – rather than any use patterns or geographic demands)
- how these innovations and new flexibility may be applied generally to all labels, not just new labels or labels subject to review

5. Systems Base to Regulators

There are a number of critical systems missing from all regulators involved in the national scheme which should assist the review team in identifying why there has been no significant progress in the regulation of Agvet chemicals over the last 20 years.

These include:

- **Continuous improvement** – of regulator processes and systems, or lack of systems. The lack of genuine engagement with industry and end-users (including the States/Territories) – not just registrants – is evidence of how far removed APVMA is

from a coherent system of continuous improvement. If you are not willing to put yourself in a position of identifying or quantifying your performance, then it should be no surprise that the same mistakes and poor outcomes are repeated.

- **Quality Assurance** – a focus on both processes and outcomes to ensure regulators are well focussed on their own performance and are able to identify and repair/reform their own processes that are impediments to better performance. The lack of clear, industry-agreed Key Performance Indicators – let alone feedback loops from chemical users to APVMA - should signal to the review team that the current structure and processes ae not fit for purpose.

- **Access to Expertise** – while some level of basic competence is a reasonable expectation of APVMA and State/Territory regulatory staff, it is not surprising that many staff do not have specific knowledge of either chemical use patterns in the field, application technology (such as aircraft) or nozzle performance parameters or drift management technology. While there are clear exceptions to this observation – with APVMA having some very talented experts in their areas – the surprising element is that there is no system in place to 'normalise' APVMA access to experts from industry or academia.

  AAAA has been suggesting to APVMA for years the establishment of an 'aerial application working group' or similar – with zero response.

  In almost all cases, the first time any actual chemical user (as distinct from registrant) will see a new label is *after* APVMA has approved it. By this stage, incorrect language or even worse – incorrect practices – can be embedded in the label by neither registrant or APVMA having application expertise. For example, there are many labels that combine a spray quality requirement with a nozzle requirement that is unable to deliver the spray quality. This situation would be avoided if a specialist 'aerial application working group' were able to have input to deidentified labels, or could help APVMA develop standardised label language that avoids these problems.

- **Genuine Engagement and Consultation** – APVMA has no systems in place to ensure regular, formalised or structured discussions with industry or other stakeholders. What contact there is is generally driven by industry seeking improvements or resolution of an emerging problem.

  While there is no coherent system for consultation, genuine engagement with stakeholders is even further removed. Cooperative regulation in this environment is even further removed.

  The lack of a consultative reflex within APVMA remains both a cultural and structural issue, and despite the efforts of a few individuals to seek industry views this is an ongoing shortcoming that may require a legislative fix.

6. Issues Paper Feedback - reforms

In addition to AAAA participation in a relatively brief on-line consultation with the review panel and the suggestions for reform made in this submission, AAAA confirms the following comments on the issues paper and particularly the seven priority areas or 'flagship proposals' identified:

- increasing national consistency of control of use Review of the agvet chemicals regulatory system—future reform opportunities

  Strongly supported – especially for aerial application licencing. See for example, Appendix 3.

- removing consumer and non-primary production products from the system

  Strongly supported – at various times, this loss of focus has compromised a range of work being conducted on agricultural products.

- introducing a benefits test

  Strongly supported – this is critical missing context for APVMA decisions and particularly clouds issues regarding safe outcomes, innovation and cooperation with industry sectors such as aerial application.

- changing the way chemical product efficacy is managed

  Strongly supported - Many requirements on label are there for efficacy purposes – as distinct from safe application purposes – but as they are on label they are regulated by the States and Territories as a 'mandatory' compliance item – occasionally leading to situations where applicators are held liable for non-compliance with a label efficacy issue that should be within the permit of the landholder using the product and requesting a particular approach.

- introducing a registration by reference approach

  Strongly supported. Recognition of the small relative size of the Australian market and the difficulties in bringing well-researched and supported chemicals in from overseas is long overdue.

- introducing smart labelling

  Strongly supported - It is incredible that this process even needs to be identified in a 'reform' package – it should be a clear objective of APVMA if it had such a thing as a continuous improvement system. The frustrating industry experience of trying to work with APVMA on the development of a new approach to drift management – now seen in the Stage I reforms and the stalled implementation of Stage II (the more meaningful and only genuine 'reforms') – highlights the difficulty in getting APVMA and the

States/Territories to 'keep up' with modern practices that are easily anticipated by any organisation with an eye on continuous improvement or opportunities for efficiencies and productivity. The fact that modern agriculture and application includes the use of information from the internet appeared to be an eye-opener for APVMA when the concept of a label incorporating e-references was first put to them as part of the ongoing discussions with NWPPA regarding establishing Stage II drift management policy reforms. See also Appendix 4 – AAAA Submission to APVMA on Stage I Drift Management Policy Reforms.

- introducing an accredited assessor scheme.

Strongly supported – normal business practices in accessing outside accredited assistance in meeting workload should be a standard business practice.

Further Information

If you require any further information on this submission or anything to do with aerial application, please do not hesitate to contact AAAA's CEO Phil Hurst on 02 6241 2100. Alternatively, our website is *www.aaaa.org.au*

Appendixes:

Appendix 1 – AAAA Submission to APVMA on Stakeholder Engagement – Feb 2020

Appendix 2 – AAAA Submission to the Review of Ag Vet Legislation – March 2019

Appendix 2.1 – AAAA Drone/UAS/RPAS Policy

Appendix 3 – Minutes of PSIC Working Group on National Pilot Licencing - 2008

Appendix 4 - AAAA Submission to APVMA on Stage I Drift Management Policy Reforms - 2019

Appendix 5 – AAAA Submission to Productivity Commission - 2007

Appendix 1 - AAAA Submission to APVMA on Stakeholder Engagement

21 February 2020

By Email to: APVMAConsultation@apvma.gov.au

AAAA Submission – APVMA Stakeholder Engagement Framework

Introduction

Please find following the Aerial Application Association of Australia submission on the APVMA stakeholder engagement and consultation processes.

AAAA congratulates APVMA for the long overdue step of asking stakeholders how the APVMA can engage and consult better since the last opportunity in March 2012 when AAAA last made a submission on this topic.

No observable improvements in consultation have been made over that timeframe.

Unfortunately, the proposed draft APVMA Stakeholder Engagement Framework and Activities appear to offer little new or innovative and will perpetuate the problems identified in this submission.

AAAA rejects the drafts as inadequate and has provided a more comprehensive approach in our 'Recommendations' in this submission.

Unless there is a stronger commitment to a more open, transparent and engaged APVMA, backed by a stronger consultative framework and systems, it is likely that this consultation on consultation will follow the same path as the 2012 process – with no improvements resulting.

AAAA is the peak body representing aerial application companies and pilots in Australia and represents over 90% of all aerial application conducted in Australia. AAAA provides a wide range of representative, educational, training, accreditation and related program services to members. AAAA has been working closely with APVMA since its inception in providing valuable advice and practical ways forward across a wide range of issues, including chemical reviews. AAAA is also an executive member of the National Working Party on Pesticide Application.

The Problem

The most critical issue is that APVMA still has no coherent system in place for consultation initiated by APVMA, and especially for groups that have a critical role in the safe application of chemicals but who sit outside the closed registrant/regulator relationship.

It is this lack of a system-based, framework supported and consistent approach to involving a wide range of stakeholders in APVMA processes and decision making that remains the core problem.

The state of health of the APVMA commitment to consultation was no more evident when APVMA published its request for submissions for this process just before Christmas 2019, with submissions closing on 24 January.

Clearly this signals little internal interest in genuine consultation - or a culture of meaningful engagement - when this cynical timeframe is considered.

The extension of submission time by an additional month was belated recognition that the negative response from stakeholders indicated that even on this threshold issue, the APVMA continues to get consultation and engagement very wrong.

Genuine commitment to consultation would warrant a range of formal and informal systems and structures that would encourage openness and transparency with stakeholders.

Only then can the APVMA earn the trust of industry that it will not only seek input, but will listen, engage, discuss and make changes based on stakeholder input within its legislative responsibilities.

Legislation and Better Practice

There is both a clear head of power for consultation and a responsibility to consult under Section 8 of the *Agricultural and Veterinary Chemicals (Administration) Act 1992* – the APVMA's establishment legislation.

These powers and responsibilities should be informing and driving a consultation system within APVMA.

The lack of coherent consultation systems is not acceptable from any regulator aspiring to comply with the Department of Prime Minister and Cabinet recommendations – as outlined by the Commonwealth PMC Office of Best Practice Regulation *Guidance Note on Best Practice Consultation* (see https://www.pmc.gov.au/sites/default/files/publications/best-practice-consultation.pdf).

Even compared to other Commonwealth regulators/agencies the APVMA has no overarching consultative structures or systems in place that might deliver better outcomes.

For example, the Civil Aviation Safety Authority (CASA) has established its Aviation Safety Advisory Panel and Technical Working Groups structure to ensure engagement with industry on regulatory reform and to access expertise drawn from across industry. In a highly technical area, this provides CASA with access to expert practitioners while also ensuring consultation across the industry.

This system also addresses the issue of potential 'capture' of a regulator through transparency, clear scoping, coherent policy underpinning consultation, and a strong risk management basis to all discussions.

While not perfect, the CASA system at least provides a coherent framework for consultation and engagement.

Current APVMA Practice

While the positive relationship between APVMA and the National Working Party on Pesticide Application (of which AAAA is an Executive Member) is welcome, after years of work it was resulted in only very modest positive change – with the significant reforms of the agreed Phase 2 Drift Management Policy Reforms still not implemented.

It must also be noted that the NWPPA was established as a direct result of industry concerns with the lack of engagement of APVMA with user groups and others over critical issues including the APVMA Drift Management Policy.

The positive approach of the NWPPA to APVMA over many years has underscored the value of consultation and engagement – ranging from better policy to resolution of technical issues and the adoption of innovation – but the NWPPA should not be considered a replacement for the APVMA's own consultation system and framework. It should be seen as supporting that framework - which currently does not exist.

The positive, welcome, but limited arrangement with NWPPA stands in strong contrast to the lack of consultation over strategic direction or priorities, particular chemical reviews (eg 24D suspension and permits), the lack of standing technical committees that would provide significantly improved access to expertise and practical user-based knowledge to APVMA (such as for aerial application), and the general lack of systems that would support APVMA staff keeping up to date with industry developments and innovation.

In particular, APVMA does not take a problem-solving approach in cooperation with industry – perhaps partly due to the restrictions of legislation around registrations and the understandable need for protection of commercially sensitive information provided by registrants.

However, not all issues or problems are in this sensitive context and many could be resolved through a better understanding by APVMA of modern industry practices, or even the development of improved practices to remedy concerns identified. It is not possible, however, to remedy a problem that is not raised with industry because there is no consultative mechanism.

Innovation in APVMA consultation, engagement structures and information flows would be welcomed by industry and should be developed in close consultation with industry.

Transparency and Problem-Solving

One thing that has not significantly changed over the last 20 years is the ongoing inability of APVMA to work with industry cooperatively to identify, research and prepare better solutions in a transparent and timely manner.

Industry – both registrants and AAAA – have consistently proven their willingness over extended periods of chemical reviews (eg 16 years for 24D and counting) to provide relevant information, undertake further research at its own expense and to work cooperatively to improve outcomes – when given the opportunity by APVMA.

The recent 24D suspension and subsequent permits are a good example of specialised knowledge from end-users being critical to better outcomes across a number of drift management, environmental and WHS goals. The lack of consultation on the suspension left APVMA open to criticism on a number of fronts by a number of severely affected industries – which was then resolved through urgent consultation and information from industry regarding use patterns.

The question must be asked – why would APVMA *not* have a consultative system in place for better outcomes that in the end it adopted anyway?

While the 2018 24D suspension process took place with zero consultation with AAAA or anyone in the aerial application industry, the *subsequent* permit work between AAAA and APVMA staff clearly

demonstrated the utility of APVMA being more open and cooperative with industry to explore better solutions – which eventually ended up on permits to the benefit of the pasture, forestry and sugar cane industries in particular.

While this outcome was made possible by the goodwill of particular APVMA staff and their willingness to engage with AAAA, this only came *after* the failure of the initial non-consultative approach and a subsequent strong negative response from industry.

It may be instructive for APVMA to consider its performance in this instance in terms of better managing future engagement with industry - especially applicators and users as distinct from registrants only.

Intentional isolation from end-users, an over-reliance on internal processes not aimed at contributing to a better overall outcome and an unwillingness to implement systems and policy focussed on problem solving, innovation and continuous improvement are just some of the considerations APVMA should address.

APVMA could have simply avoided the embarrassment and the last-minute scramble to get 24D permits right by engaging more openly with industry over the challenges it had identified *before* the suspension was made.

The improvements finally made in the 24D permits also highlight the validity and utility of the proposed approach for the Stage 2 Drift Management reforms which are again delayed due to APVMA wanting to revisit earlier discussions and understandings.

APVMA Lack of Supporting Systems for Staff

The lack of consultation across a number of areas with industry also demonstrates how little experience APVMA staff, ***with a few notable exceptions,*** have in considering modern aerial application industry practices - ranging from nozzle design and availability through to aircraft operation and the potential of enclosed mixing systems to reduce worker exposure to name only a few areas.

This is not a criticism of any individuals – it is an identification of a lack of supporting systems to ensure APVMA staff can stay up to date with industry practices and potential solutions to problems through continuous learning

For example, the 24D permit experience – largely replicated now in the review findings – is that by enabling the recognition of the 'normal' use of lower (but still highly effective) rates rather than the maximum label rate, buffers can be safely reduced for drift management and exposure levels of workers more accurately modelled.

Without industry input, collation of real 'use' patterns and knowledge of best practice (facilitated by peak bodies such as AAAA), APVMA potentially locks-in 'worst-practice', stifles innovation and misses the opportunity to build win-win scenarios.

Without either this in-house knowledge, a system to empower continuous learning, or a system to harness the knowledge, experience and innovation of industry, APVMA will continue to perform sub-optimally and deliver poor outcomes for the Australian agricultural community.

Improving Access to Expert Advice and End Users (applicators)

The APVM should address the current weaknesses arising from the closed relationship between APVMA and registrants which is leading to poor label outcomes due to the lack of expert advice from applicators being included in the registration and review processes.

AAAA believes that APVMA should at least establish a technical application expertise working group, with a principle first aim of establishing the parameters for useful information to be included on label – and also identifying what should be recommended to ***not*** put on labels.

Many labels illustrate a very poor understanding of, for example, the functioning of ASAE S572 and how it should be used on label for spray quality. In a number of examples on current labels, the label is clearly contradictory by requiring a spray quality and then a piece of equipment that cannot deliver that spray quality. If using the spray quality standard, any prescriptive mention of equipment is simply not required and counterproductive. In many examples, it is simply wrong and likely to result in poor outcomes and uncontrolled drift.

An Application Technical Working Group could address many of these issues, if participants were given access to the issue at an early enough stage of label development and if there was an agreed set of label statements addressing these issues.

Recommendations

APVMA should immediately establish a relatively small Consultation Advisory Group including representation from Croplife and AAAA in addition to senior APVMA staff to develop a consultation framework and systems.

The Consultation Advisory Group should consider:

1. The current APVMA Stakeholder Engagement Framework and Activities

2. The PMC Best Practice Consultation Guide

3. Establishment of a permanent higher-level strategic industry consultative group to facilitate policy discussions, continuous improvement and identify potential initiatives to support positive APVMA outcomes

4. The strategic industry consultative group establishing a workplan/prioritisation of issues brought forward by industry and the NWPPA

5. Establishment under the strategic industry consultative group single-issue consultation groups as required potentially including:
    a. Permit System Review (to consider an improved permit system)
    b. Label Simplification
    c. Chemical User Education and Training
    d. Drift Management

6. Establishment of a permanent Chemical Users Advisory Group or potentially, smaller groups for ground and aerial application issues

7. Formalisation of the relationship between the APVMA and the NWPPA as part of the APVMA consultation framework

8. Formalising the role of the Technical Advisory Group of NWPPA and APVMA

9. Identifying any other structures or systems to improve the support of APVMA's staff in establishing and maintaining relevant knowledge of industry practices, perhaps including:
    a. an industry interchange program
    b. regular site visits in cooperation with industry peak bodies, or
    c. a regular (or even annual) series of seminars and/or field days for APVMA staff on current practices and innovation

10. If APVMA has appropriate structures and practices in place to ensure State and Territories control of use regulators are consulted in relevant policy discussions such as the proposed Phase 2 Drift Management policy reforms

11. The role of APVMA as a leader, in cooperation with industry, the States and Territories and the Commonwealth Dept of Agriculture, in the consideration of long-term issues of concern brought forward by industry and the NWPPA including those in 4) above

Further Information

If you require any further information on this submission or anything to do with aerial application, please do not hesitate to contact AAAA's CEO Phil Hurst on 02 6241 2100. Alternatively, our website is *www.aaaa.org.au*

Yours sincerely

Phil Hurst
CEO - AAAA

Appendix 2 – AAAA Submission to the Review of Ag Vet Legislation

29 March 2019

AAAA Submission to the Review of the Ag Vet Legislation

Regulation of drones
AAAA is appalled at the lack of policy and regulatory action to appropriately address the regulation of drones / UAS and their application of agricultural chemicals.

There has been little effort by the Commonwealth or the States/Territories to actively engage with AAAA or the two drone associations on this important issue. At a recent meeting of the States/Territories to consider this issue, neither AAAA nor the drone associations were invited to provide information or otherwise consulted.

AAAA was so concerned with the lack of understanding of the issues involved that it prepared and distributed to State/Territory chemical control of use regulators a policy document outlining the issues and calling for a level playing field in regulation.

A copy of that AAAA Policy is included below at APPENDIX 2.

Unless drones are appropriately regulated – including establishing baseline competency requirements, chemical safety standards and other relevant systems already demanded of piloted aerial application – it is likely that damage will be caused, placing direct, unwarranted and avoidable pressure on agricultural chemicals – and regulators.

The Commonwealth should play a leadership role and urgently convene a taskforce that includes AAAA, the two drone associations, CASA, the APVMA and the States and Territory chemical control of use regulators.
The aim should be to develop a coherent and nationally consistent framework of competence, systems, licencing and regulation to ensure drones have to meet the same standards as all aerial application and have the same responsibilities for due diligence.

APVMA Risk Management and Consistency
Embedding a simpler risk assessment approach for aerial application that is based on consultation with relevant sectors to ensure APVMA staff can access expertise is more critical than ever.

Aerial application is still being treated by APVMA as a higher risk application – despite all evidence and performance data to the contrary available from State/Territory regulators.

There is a considerable disconnect between industry needs and APVMA processes where the outcome is registrants not pursuing aerial application registrations at the same time as they apply for ground registrations due to the known time delays this will cause – entirely due to

APVMA processes for aerial assessments that cause delays that may extend over several cropping seasons.

As there is no formal mechanism requiring APVMA to seek end-user expertise or advice regarding probable use patterns, APVMA staff are making assumptions that are incorrect and not presentative of industry practice.

These often non-transparent assumptions then skew assessments and are very difficult to correct after APVMA makes a decision.

A simple mandatory requirement to consult – perhaps through the long-suggested APVMA aerial application working group including AAAA – would remove much of the inconsistency and lack of understanding of use displayed in APVMA assessments and outcomes.

Introduction of a mandatory 'level playing field' between aerial and ground assessments, including the introduction of standardised templates including agreed application methods and standards is essential to remove the variation between individual assessors within APVMA which often depends on their familiarity or lack of it with aerial application issues. The policy aims should be to remove the current outcome whereby aerial approval is seldom applied for in the first year of a product as registrants are keenly aware that this will result in APVMA delays in assessing the overall registration.

The longer-term outcome is less aerial application available on label despite superior performance in terms of reduced drift management incidents when a product is applied by air rather than ground. This outcome is verifiable by checking with State government control of use agencies, and by reviewing recent chemical approvals that have not included aerial because of this long-standing issue.

AAAA attempted to assist APVMA in this regard by offering to co-fund an independent review of APVMA approval processes for aerial, and while this received in-principle support from the CEO of APVMA, it has not been taken forward by APVMA staff.

The most recent example of these problems is the suspension of 24D products, which failed to consider – due to the lack of knowledge of industry use patterns and the lack of formalised channels of consultation between APVMA and chemical users – current industry use patterns on pasture, cane and forestry applications. This resulted in a subsequent correction required through an additional permit.

Permit regulations review

The 24D suspension experience again highlights the shortcomings of the current regulatory framework around permits.

AAAA strongly supports a reform of the current 3 categories of permits allowed (4 if you count APVMA's ability to issue a permit in its own name – as per the current 24D permits).

One way forward would be to consider an amendment to the *Ag Vet Chemical Code Regulations 1995*, *Part 6-Permits, Clause 57(2).*

This current list of 3 permit types could simply be extended by a new permit type called 'Better Practice Permit' or similar and potentially an additional permit category for aerial application as an interim measure.

This could also be a mechanism to enable the earlier implementation of the proposed Phase 2 of the new APVMA drift management system.

The details of such a reform are included in the recent AAAA submission to APVMA, which is included below at APPENDIX 1.

Lack of APVMA Consultation Systems

Better consultation and coordination with the States/ Territories and ag chemical peak user groups such as AAAA would improve a nationally consistent approach to issues – ie a policy leadership role that could sit with APVMA or perhaps with the Commonwealth Department of Agriculture.

The lack of a culture of engagement, openness and consultation is clearly still an issue with APVMA as evidenced by AAAA's experience in the complete lack of consultation on 24D suspension up until the making of the suspension.

Once the suspension was gazetted and made public, there was significant engagement – initiated by AAAA – which resulted in the correction of major omissions for agricultural and forestry use by APVMA. This resulted in the issuing of an additional permit to reverse the damage caused by APVMA's lack of consultation.

However, the lack of systematic engagement is not limited to particular chemicals, reviews or assessments.

NWPPA and the Proposed New National Drift Management System

The National Working Party on Pesticide Applications (www.nwppa.net.au), of which AAAA is a member, has been working closely with APVMA over many years to try and gain relatively simple improvements to the APVMA drift management and labelling systems. Despite the assistance (including significant funding of technical projects to support improvements) and very positive engagement initiated by the NWPPA, it has only relatively recently come to light that APVMA had not been engaging with the States and Territories on how the proposed and accepted new system might actually be implemented by the chemical control of use regulators at the State/Territory level.

This threatens to derail the significant improvements that would be made to industry practice and the capability of industry to vary and comply with labels based on improved in-field assessments of drift management requirements.

APVMA's current approach to label statements based only on worse case scenarios is penalising industry – despite sound and transparent science indicating it is entirely possible and highly desirable to have a more flexible label to empower improved use strategies. There is also strong international precedent for such an approach.

This is clearly acknowledged by APVMA's support of moving to a better system and its engagement with the NWPPA – but the essential work to engage with the States/Territories on this issue is well overdue.

The key ability of APVMA to refer to other documents on the label – thereby simplifying the label and improving industry access to knowledge and sound practice – is a central tenet of the proposed new policy – including the use of an on-line spray drift management tool. Broadening the definition of 'the label' to allow references on a label to documents, procedures or processes or policy outlined elsewhere – eg on the internet and which are freely available to users – would bring labels into the current century and offer a wide range of additional benefits including:

- Less label clutter / greater readability
- Improved identification of key safety issues
- Better access to additional information and practices
- Matching of buffers to in-field conditions
- Reduction of buffers and risk by use of lower rates
- Likely improved label compliance

This will be a critical improvement and clarification for the urgent introduction of Phase 2 of the APVMA proposed drift management scheme that will permit greater clarity and brevity on labels.

Interestingly, the APVMA already uses and the States/Territories accept off-label references to a range of materials including resistance management strategies, but their appears to be an issue with the extension of this same principle to proposed off-label references to reduced buffers using an APVMA proposed process.

Without the States and Territories being able to recognise this process through their own legislation – which may require amendment in their own jurisdiction - the proposed new system will not function.

The likelihood of this new system suffering additional delays of several years is high without an urgent and concerted effort by APVMA to engage with the States and Territories to deliver the new system.

It appears there is a consensus – including the NWPPA, the APVMA and at least some States and Territories – that the proposed new system represents a generational opportunity for improvement in the national agricultural chemical management system.

Given that level of support, it is disappointing that it will still be years before industry is likely to realise the benefits in the field without a strong Commonwealth focus on bringing the new system to life in the shorter term.

AAAA's most recent submission to APVMA on the importance of moving forward on both Phase 1 and Phase 2 of the proposed new system is included below at APPENDIX 1.

Further information
If further information or explanation is required in support of this submission, please do not hesitate to contact AAAA on 02 6241 2100.

Yours sincerely

Phil Hurst
CEO

Appendices
1. AAAA Policy on Drones

Appendix 2.1

AAAA Policy Position UAS/RPAS/Drones

The concept of a 'level playing field' is critical to AAAA. There is simply no good reason why UAS operations should not be subject to similar licencing and competence requirements as piloted aircraft.
UAS pesticide licencing could work in a simple manner to attain what is largely a level playing field between all aerial applicators.

1. UAS Pilot licencing:

a) In keeping with the approach used for piloted aircraft, there are two broad elements of competence that need to be covered – competence in flying (CASA licencing) and competence in chemical application (EPA / State control of use agency licencing).

b) Consequently, AAAA sees it as appropriate that if a pilot holds CASA certification/licencing for UAS operations, and then attains AAAA Spraysafe accreditation (ie the only chemical training available for aerial application – and already accepted by every State/Territory), that the State control of use regulator should be able to issue them with a licence.

c) The level of competence for aerial application pilots will simply be higher than UAS operators because aerial application pilots are required to hold a Commercial Pilots Licence and an Aerial Application Rating and a Class 1 medical (although that is changing to permit Class 2 medicals) and are bound by a range of CASA regs that may contribute to improved safety (fatigue management etc). These 'additional' qualifications and competencies contain significant additional elements of risk management, human factors and application-specific training such as meteorology. This is an area where there is a capability or training gap that warrants additional discussion.

d) The State control of use regulator may consider placing conditions on the licence to ensure equal regulatory coverage with piloted aircraft by specific mention of use of risk management, spray drift management, record keeping etc.

e) In particular, AAAA believes that aerial application of pesticides should only be allowed to be conducted by a UAS operator when working under the direct control of a business as below.

2. UAS Business licencing:

a) In keeping with the approach used for piloted aircraft (except WA), UAS application should not be permitted without licencing coverage of the business overseeing the pilot and application.

b) Consequently, AAAA sees it as appropriate that if a business holds CASA certification/licencing for UAS operations, then the State control of use regulator can use that as a basis for licencing if other conditions of licencing are met, including evidence that the business has in place relevant systems to manage the risks associated with aerial application.

   This could be achieved in a number of ways:
   - Negotiation of State by State licencing conditions covering systems etc and clarifying the application of existing regs to UAS ops (eg offences, record keeping etc)

   - Use of the previously drafted National Operating Standards for Aerial Application developed through the PISC (COAG) process – covering drift management, spray quality and communications systems requirements.

   - Use of the AAAA Spraysafe Business accreditation checklist – possibly amended to be more relevant to UAS ops. However, without UAS members, AAAA is not interested in undertaking any additional work that detracts from our focus on members.

3. UAS Label Compliance:

There remains one significant additional gap, however, and that is the ability of UAS operators to provide scientifically valid assessment of their spray quality to ensure what is recommended on label (eg spray quality, water rates, buffers – leading to adequate coverage, efficacy and drift control etc) is able to be delivered in the field.

Piloted aircraft are able to use existing models (eg AgDrift / AgDisp / AAAA Nozzle calculator) that have been developed by the industry over previous decades, along with manufacturers' data and wind-tunnel research outcomes – to accurately predict spray quality in operational settings for existing fixed wing and rotary wing aircraft types. These models are used by APVMA – using 'typical' operating assumptions on aircraft type etc – to establish relevant buffers and spray quality on chemical labels.

These field-verified predictive models – while conservative and only valid to 800 metres - take into account near-wake effects of turbulent airflow on nozzle spray quality and provide confidence to regulators, registrants, operators and pilots that the platform is producing a known spray quality.

The same supporting material is simply not yet available for UAS operations and may require additional research (eg using CPAS at UQ Gatton) to establish whether there is any issue and if there is, the scope of it.

Placing a nozzle directly under a rotor producing a turbulent airflow at significant speed could theoretically lead to secondary shattering of droplets, with a subsequent 'fining' of the spectrum and consequent increase in drift potential. Manufacturer's data for most common ground nozzles is derived from testing with water+surfactant IN STILL AIR. That means it may not be what is happening under a rotor…

If the label says ‘COARSE’ then we need to be comfortable that the platform is actually producing ‘coarse’ in the field.

There is also an issue of slow forward speed of some UAS platforms leading to operations conducted lower than translational lift speed. Above translational lift, aircraft vortex sheets unroll and a helicopter performs in similar manner to a fixed wing from the perspective of vortices. Below translational lift, rotary platforms create a vortex ring that does not unroll, or only partially unrolls.

In turn, this could lead to increased entrainment of droplets, potential recirculating of spray, increased release height and possibly more drift. How much drift is the key question that needs answering? UAS lower weight may also come into play to mitigate this effect but this is another unknown. CPAS at the University of Queensland may be able to assist with either expertise or establishing a field trial to remove doubt or identify issues.

There are additional UAS ‘hardware’ issues that may also need addressing. Issues such as suck-back, check valves and pump line security may be relevant when considering potential failures over a non-target are. Given current requirements for line-of-sight only ops and the potential ability of the UAS to operate only over the target area, this may be mitigated already…

In the longer term and based on additional research, there may be a case for the APVMA to actually undertake additional work in this space, or potentially to have a separate UAS registration process to put data on label, including buffers relevant to UAS ops. It may be the case that the proposed reform of the APVMA buffer system may be flexible enough to address these issues – see current discussion paper due for comments 29 March 2018.

AAAA notes, however, that there appears to be an unconfirmed but pervasive understanding that if a chemical is registered for aerial application then it is registered for UAS application. This may also require formal legal confirmation.

Appendix 3 – Minutes of PSIC Working Group on National Pilot Licencing - 2008

MEETING TO DISCUSS THE PROPOSED NATIONAL AERIAL SPRAYING LICENSING SCHEME

Canber ra

16 September 2008

OUTCOM

ES Attendance:

Working Group 2:

Janet Kerr (Chair) Dept of Agriculture, Fisheries and Forestry
Jenny Ritchie Dept of Agriculture, Fisheries and Forestry
John Kassebaum Primary Industries and Resources South Australia Wayne Thompson QLD Dept of Primary Industries and Fisheries Roger de Keyser NSW Dept of Environment and Climate Change Phil Hurst Aerial Agricultural Association of Australia
Andy Hawkins NSW Dept of Environment and Climate Change
Vlad Kawalowski NT Dept of Primary Industries, Fisheries and Mines Chris Sharpe WA Dept of Primary Industries and Water
Sue Duncan VIC Dept of Primary Industries
Michael Cooper SA Dept of Health
Carolyn Lewis SA Dept of Health

OUTCOMES OF DISCUSSIONS

Participants noted that:

- the purpose of the meeting was to provide an opportunity for those state/territory departments not represented on the working group to discuss the proposed scheme with the working group and provide feedback
- the working group (see membership above) was established by PSIC to progress the development of a national aerial spraying licensing scheme
- the March 2008 PSIC meeting signed off on Recommendations 1-8 and asked the working group to progress further work, including
  - the development of national operating standards for aerial spraying businesses, business license conditions and criteria for cancellation/suspension
  - apportioning liability and investigating alternative enforcement options for promoting behavioural change

  - consideration of a standardised approach to setting license fees
- recommendations 1-8 have been updated to reflect later decisions made by the working group
- while the proposed scheme imposes some additional requirements on businesses, it reduces the regulatory burden on the industry, eg by removing the need for pilots to be licensed and addressing the anticompetitive elements identified by the National Competition Policy Report on chemicals regulation.

The following points were made in discussion of the recommendations in the draft working group report.

Recommendation 1 *The proposed scheme for the aerial application of agricultural chemicals will:*

- *Apply to businesses and all persons involved in the aerial application of any agricultural chemical product regulated by the Australian Pesticides and Veterinary Medicines Authority (APVMA), including vertebrate poison baits such as those including 1080.*
- *Not apply to the aerial application of fertilisers.*
- *Treat pilots who aerially apply agricultural chemicals on their own land as a business involved in the application of agricultural chemicals.*

Comments:

- This recommendation sets out what should be included in the scheme. Most jurisdictions were comfortable with the proposed scope of the scheme. However, WA Agriculture and SA Health were concerned about the inclusion of pilots applying baits by air.
- Under current arrangements, WA and SA do not require pilots to have chemical application competency (ie be licensed) to apply 1080 baits by air because the bombardier actually applies the baits. It was noted that, in this case, the bombardier should have chemical training. CASA exempts pilots applying 1080 baits from the requirement to have an agricultural rating on the basis that they do not fly below 300 feet to drop baits. However, mosquito and mice baits (pindone and zinc phosphide) are applied by the pilot and, to apply these baits, the pilot has to have an agricultural rating and be licensed (ie have the necessary competencies) to apply chemicals by air.
- While acknowledging that state/territory exemptions for 1080 baiting would undermine a national approach, WA indicated that flexibility is needed because of the high demand for licensed pilots (pilots with chemical application competencies) and the costs of engaging these pilots to apply 1080 baits in remote areas.

Outcome:

- It was agreed that the working group consider options for exempting pilots applying 1080 baits, subject to their meeting certain standards or requirements.

Recommendation 2 *Businesses must be licensed in each jurisdiction in which they operate and must hold an Air Operators Certificate (AOC) for agricultural operations. The business licence must be renewed every 5 years.*

Comments:

- While WA Agriculture supported the business only licensing model, it was noted that WA Health may still want to license pilots, in addition to businesses.
- SA asked for an aerial spraying business to be defined. It was noted that any aerial operation must have a CASA business license (an AOC). This includes a pilot who runs his own business (owner operator) and larger aerial businesses. Where there is an interaction between businesses, eg where a business licensed to apply chemicals by air in one state employs an owner operator from another state, the business employing/contracting the owner operator is the business that must be licensed in that state.

Outcome:

- The business only licensing model was generally supported, noting that while WA Agriculture supported the model, WA Health may still want pilots to be licensed.

Recommendation 3 *Businesses must only employ (or contract)* ***persons*** *i.e. pilots, mixers and loaders who hold an accreditation of appropriate competencies. (see WG2 Recommendations* 6 *and* 8 *respectively).*

Comments:
- The word "persons" is unnecessary, given that pilots, mixers and loaders are the persons that have to be competent.
- With respect to how an alternative pilot accreditation scheme would be determined to be equivalent to Operation Spraysafe, it was suggested that it would be the responsibility of the proponent of the scheme to advocate its equivalence to the state/territory regulatory authority.

Outcome:
- The reference to "persons" to be removed from the recommendation.
- It was noted that the proponent of any future pilot accreditation scheme would be responsible for demonstrating its equivalence to Operation Spraysafe to the state/territory regulatory authority.

Recommendation 4 *Person's i.e. pilots, mixers and loaders must only work for a licensed business and must disclose the following information so the business can make an informed judgement as to their competency.*

Pilots must disclose all relevant information for the business to adequately assess the pilot's competency. This includes:
- *Proof that they are permitted to fly; i.e. a CPL and current class 1 medical certificate - CASA requires pilots to carry their CPL.*
- *Proof that they are competent; i.e. Operation Spraysafe accreditation or equivalent - pilots who are Operation Spraysafe accredited are issued with a card which includes an expiry date.*
- *Other relevant information that would have a bearing on an assessment of their competency; e.g. Whether they have/are currently being investigated and/or are subject to some form of remedial action in relation to an offence under COU legislation. This wouldn't necessarily preclude the business from hiring a pilot. Rather, it is included so that the business owner can make an informed judgement as to the competency of the pilot for the tasks required.*

Mixers and loaders must disclose all relevant information for the business to adequately assess the pilot's competency. This includes:
- *Proof that they are competent; see Recommendation 8*
- *Other relevant information that would have a bearing on an assessment of their competency; e.g. Whether they have/are currently being investigated and/or are subject to some form of remedial action in relation to an offence under COU legislation. This wouldn't necessarily preclude the business from hiring a pilot. Rather, it is included so that the business owner can make an informed judgement as to the competency of the pilot for the tasks required.*

Comments:

- WA raised the issue of requiring mixers and loaders engaged by a business in remote locations to be trained. It was noted that SA only requires mixers and loaders to be trained if they work for the business on a contractual or commercial basis.
- Operation Spraysafe training for mixers and loaders covers all the AQF3 competencies they need to do their job. However, NSW requires mixers and loaders to have all AQF3 competencies, including calibration and application competencies which mixers and loaders do not require, because they may be employed in other areas which require these competencies. This issue is discussed under recommendation 8.

Outcome:

- All participants accepted that mixers and loaders must be trained. See also outcomes of recommendation 8.

Recommendation 5 *Businesses must keep records including, but not limited to, the following:*

Personnel Records:

- *The names and addresses of the pilots, mixers and loaders it employs.*
- *Records of the training undertaken by pilots and the staff employed to mix and load chemicals onto aircraft.*

Spray Application Records:

- *Name of the pilot who undertakes the spraying.*
- *Name and address of client.*
- *Date of spraying and the times when spraying commenced and finished.*
- *Full trade name of each chemical used.*
- *The APVMA registration number for each chemical used.*
- *The batch number of each chemical used, if legible.*
- *Quantity of each chemical product used, wetting agents or other materials added and mixed with what volume of water or other carrier.*
- *Rate(s) of application for each chemical used.*
- *Specific location of the target area and total size of area sprayed, preferably with an indicative map, showing the location of any sensitive areas (such as waterways, residences, etc.) contiguous to the target area.*
- *Target pest to be controlled by the application.*
- *Crop/situation in the target area.*
- *Weather conditions at the time of spraying (including wind speed and direction) and any changes in the conditions occurring during the spraying and time of change.*
- *The aircraft registration mark.*
- *The permit number if use is authorised by a permit issued by a state/territory or the APVMA.*

(Comment: we have proposed no records relating to the spray equipment used, its calibration or maintenance; or outcomes of any site risk assessment.)

Comments:

- The AAAA "Class" computer record keeping program would need to be upgraded to include additional requirements.
- Records relating to spray equipment, calibration and maintenance and the outcomes of site risk assessment will not need to be kept (see comment at the end of the recommendation)

because the product label approved by the APVMA will include spray quality requirements. In addition, good businesses will keep these kinds of records as a means of proving that they have exercised due diligence. Although these record keeping requirements could be included in the Operation Spraysafe code of practice for businesses, each state/territory has different requirements. Operation Spraysafe would include them if they were national requirements.

Outcomes:

- The comment on records relating to spray equipment, calibration and maintenance and the outcomes of site risk assessment, should be removed.

Recommendation 6 *Pilots who apply agricultural chemicals do not need to be licensed but must have the following competencies:*

- *Hold a current commercial pilots licence (CPL) (aeroplane or helicopter) or higher Air Transport Pilots Licence (ATPL) from the Civil Aviation Safety Authority (CASA) with an agricultural application rating.*
- *The CPL/ATPL must be validated by a current relevant CASA medical certificate and pilots must meet any conditions under which the certificate has been issued.*
- *Hold a current accreditation under the Aerial Agricultural Association of Australia's (AAAA) Operation Spraysafe, or an approved alternative program in safe aerial chemical application.*

Comments:

- The question of how an alternative pilot accreditation program will be approved was addressed in discussion of recommendation 3.
- With respect to the note in the draft working group report on verification of Operation Spraysafe's equivalence to AQF training, it was accepted that this could be done by an appropriate third party auditor.

Outcome:

- The working group noted comments made in discussion.

Recommendation 7 *To ensure that high quality training standards are maintained:*

- *pilots must maintain their accreditation by updating their training in safe aerial chemical application, at least, every five years*
- *the training program will be independently audited every 5 years by an appropriate training course auditor who has extensive expertise in vocational training matters.*

Comments:

- While chemical training, eg by ChemCert and SmartTrain, at AQF3 level has to be updated every five years in order to be accredited under these programs, to be accredited under Operation Spraysafe, pilots are required to update their training every three years.
- The issue of Operation Spraysafe not being an RTO accredited training program is addressed in the discussion under recommendation 6.
- Any training package has to be reviewed every three years. Therefore, the reference in the text to the requirement to update accreditation at least every five years may not be correct.

While OSS reviews its training on an ongoing basis, it would be happy for an independent consultant to confirm the currency of the Operation Spraysafe program.

Outcomes:

- The working group to determine whether the reference in the text to the requirement to update accreditation at least every five years should be deleted.

Recommendation 8 *Mixers and loaders of agricultural chemicals must be trained in the relevant national chemical competencies equivalent to AQF3, noting that some jurisdictions may not require training in the elements of competency that relate to calibration and application.*

Comments:

- Mixers and loaders do no need to have chemical application and equipment calibration competencies and this is reflected in the mixer/loader training provided by Operation Spraysafe. NSW requires all chemical users to have all the AQF3 competencies, including application and calibration. SA recognises that mixers/loaders have to be trained to a standard but do not specify the type of training.
- It was generally acknowledged that it is inappropriate to require mixers/loaders to have a competency that is not needed for that job.
- It was suggested that Operation Spraysafe be assessed against Chemcert to determine whether the competencies it provided were equivalent, noting that AAAA already has

Outcomes:

- Phil Hurst (AAAA) to provide the working group with an assessment of Operation Spraysafe competencies for mixers and loaders against Chemcert competencies.
- Roger de Keyser (NSW DECC) to discuss the issue of appropriate competency requirements for mixers/loaders with NSW DECC training policy area.

Recommendation 9 *That the condition for holding an aerial applicator business licence shall be compliance with the following identified national standards for operating an aerial agricultural chemical spraying business classified under three broad headings, namely (1). Competency of persons; (2) Appropriate equipment: and (3) Effective risk management system:*

(1) Competency of persons

A business must…..

- *only employ/contract/engage competent/accredited pilots, mixers and loaders;*

(2) Appropriate equipment

A business must….

- *maintain equipment, including aircraft, to enable safe and effective application and to minimise risks of off-target movement,* ***public health*** *and environmental or occupational health and safety incidents*

(3) Effective risk management systems

A business must…..

- *maintain detailed records of pilots, mixers and loaders employed/contracted/engaged by the business and the competencies held by these persons;*
- *maintain detailed records of chemical application;*

- *maintain business systems to ensure that pilots, mixers and loaders operating (apply/mix/load chemicals) at and within the limits of their competency level);*
- *operate under spray quality management system;*
- *have in place a documented drift management and communication system;*
- *allow its business operations to be subject to regular third party (industry) audit (audit frequency to be determined).*

Comments:

- This recommendation sets the framework for promoting behavioural change and would be better placed at the front of the business-related recommendations. Public health should also be protected, in addition to the environment and occupational health and safety.
- Requirements for mandatory notification of serious adverse impacts, complaints handling procedures and incident registers raise the issues of self incrimination and apportioning of blame. The aerial agricultural industry is opposed to their inclusion. Before industry could consider voluntarily meeting these requirements, it would need to be made very clear whether their purpose would be remedial or punitive.
- These requirements may more appropriately belong in other state/territory legislation, eg environmental protection, rather than control of us legislation.

Outcomes:

- Include protection of public health under (2) Appropriate equipment (as bolded above).
- Reference to mandatory notification, complaints handling and incident registers to be deleted from the draft report, noting that this is a broader issue than just aerial agriculture.

Recommendation 10 *That the following **may** be grounds for cancelling or suspending the licence:*

(1) a licensee has done an act or made an omission that would not entitle the licensee to apply for or hold a licence
(2) a licence has been issued erroneously or as a consequence of any false document, statement or representation or fraudulent document, statement or misrepresentation;
(3) the Chief Executive Officer or Chief pilot of the business is in any other respect or respects not a fit and proper person to continue to manage a business holding a licence.
***(4)** a business ceases to hold an AOC issued by CASA*
***(5)** a business has a history of continual non compliance with compliance orders issued.*

Comments:

- This recommendation focuses on the key business licensing issues. Because the regulatory authority has the discretion of cancelling/suspending a business license, "shall" should be change to "may" in the recommendation.
- The fit and proper person criterion is a concern for the aerial agricultural industry. It is also difficult for regulatory authorities to enforce and should not be included in the criteria for cancellation/suspension.

Outcomes:

- "Shall" to be changed to "may" in the recommendation and requirement (4) to be split into two separate criteria (bolded above).
- Remove the fit and proper person requirement (3) from the recommendation and supporting text.

Recommendation 11 *That as an alternative to taking legal action, such as prosecution or cancellation of a licence, if an offence against COU legislation has been committed or licence conditions have been breached, there be provision in the new licensing model for a general duty statement and compliance orders system adapted for aerial application, along the lines of similar provisions contained in South Australia's* Agricultural and Veterinary Products (Control of Use) Act 2002, *i.e.:*

- *That a compliance order shall be issued by the jurisdiction where the incident or situation occurred and may, depending on the circumstances, be made binding in all other jurisdictions.*
- *That a system of notifying each jurisdiction about compliance order having been issued to a person or business be developed.*
- *That provision be retained in the new licensing model for cancelling or suspending a licence or recommending prosecution in extremely serious situations and particularly after avenues to effect behavioural change using compliance orders have been exhausted.*

Comments:

- This recommendation is designed to promote behavioural change, eg for a business, prosecution or cancellation/suspension of the license does not necessarily result in behavioural change, and is based on the SA compliance order model. In the discussion of the recommendation, the working group should recommend that these concepts be adopted into the national aerial spraying licensing model, rather than recommend that their inclusion be considered by PSIC. The text also needs to make it clear that compliance orders would apply not only to businesses but also to pilots, mixers and loaders.

Outcomes:

- The discussion of the recommendation to be amended to recommend the inclusion of the compliance order mechanism in the scheme (rather than recommend that PSIC consider its inclusion) and to make it clear that the working group recommends that compliance orders apply to business, pilots, mixers and loaders.

Recommendation 12 *[For PSIC's future separate consideration – a recommendation made by the working group but identified as ancillary to, and not falling within the scope of the national licensing scheme]*
That PSIC undertake further work on apportioning liability for, and developing nationally consistent, offences where there are multiple parties involved and to determine whether existing state/territory COU legislation has adequate provisions to apportion liability for offences.

Comments:

- This issue should be considered in the broader control of use context, given that agronomists or farmers who are not included in the aerial spraying licensing model may also be responsible for causing an aerial spraying incident.

Outcome:

- PSIC to consider this issue as a broader control of use issue.

Recommendation 13 *That PSIC undertake further work on the matter of whether both aerial and ground spraying businesses should be required to give mandatory notification of serious adverse offences and to look at the related issues of whether a business should be operating a complaints handling procedure and maintenance of an incidents register*

Comments:

- This recommendation should be removed, given that it has been agreed that mandatory notification should apply more broadly (see discussion of recommendation 9).

Outcomes:

- This recommendation to be deleted.

Recommendation 14 *That WG2, having discussed the issue of a standardised licence fee to apply to all jurisdictions, is unable to resolve the matter at this point in time. WG2 recommends that PSIC, at a time of its own choosing, consider reviewing the basis for setting licence fees with a view to developing a more standardised fee.*

Comments:

- A standardised fee setting process for business licences should be developed. COAG has a range of fee setting policies which could be applied. A cost recovery model could be considered.

Outcomes:

- PSIC to consider the development of a standardised fee setting process.

Appendix 4 – AAAA Submission to APVMA – Drift Management Reforms

8 March 2019

By email to: enquiries@apvma.gov.au
Australian Pesticides and Veterinary Medicines Authority
PO Box 6182
Kingston ACT 2604

AAAA Submission to APVMA public consultation –

Supplemental comments on the APVMA's approach to spray drift management – Stage 1

AAAA refers APVMA to its submission of 27 March 2018. In addition, AAAA adds the following key areas of concern and the need for APVMA attention to a range of issues that have emerged through experience with the suspension of 2,4-D products and the creation of new permits for its ongoing use.

Staged Approach
AAAA remains frustrated that APVMA is committed to a staged approach which will see little to no benefits accrue from the adoption of better practices such as modelling of buffers based on lower rates, better spray quality or other assessments related to on-site assessments that are more accurate than the worse-case scenario modelling used on labels.
This is a major flaw in the APVMA strategy and one that is made even less sustainable by the recent experience of developing a response (including additional amending permits) to APVMA's unconsulted suspension notice of all 2,4-D products.

Better Consultation Systems and formal structures
The 2,4-D suspension experience clearly demonstrated the value to both APVMA and industry of better consultation through improved systemic consultation processes that are still not in place between APVMA and industry.
APVMA should immediately establish a chemical users consultative group to improve the current lack of formal consultative mechanisms, with the NWPPA continuing to provide a facilitative mechanism for annual, science-based discussions.

Access to Proven Practice
The 2,4-D suspension experience demonstrated the need for APVMA to be able to deliver labels and buffers that are based on realistic models of 'standard' use rather than the compounding effect of worse-case assumption (and safety buffer) on top of worse-case assumption.
For example, even though the maximum label rate available on one popular registration of 2,4-D is 3.5 litres per hectare, there are few circumstances where more than 2 litres/ha are used and for most uses the rate falls to 1.7 litres/ha or significantly less.

The ability to recognise this in the APVMA permits issued to support the 2,4-D suspension simply underscores what is wrong with the current system in its inflexibility for users, the significant negative impact of modelling that only uses worse-case assumptions at maximum label rates and the lack of a system that can be effectively administered under State/Territory control of use legislation.
In particular, APVMA should give immediate consideration to how to bring forward the adoption of Stage 2 concurrent with Stage 1 so that benefits can be realised – especially through the use of lower than maximum label rates and consequently shorter buffers.
AAAA is especially concerned with likely delays that may arise to any adoption of Stage 2 and subsequent initiatives as APVMA does not appear to have closely engaged with the States and Territories who may struggle – according to them - to recognise any references to materials that are not directly on the physical label.
In the medium to longer term, AAAA sees this as a fundamental problem for the States and Territories to solve. The States/Territories must upgrade their approach to the recognition of technology, information storage and retrieval and the way chemical users now rely on a wide range of electronic data to support their compliance and decision making.
However, APVMA does have a methodology available to it to bring forward Stage 2 and at the same time facilitate the State/Territory recognition of better practices through a reformed permit system as an interim measure.

Immediate Reform of the Permit System
One way forward would be to consider an amendment to the *Ag Vet Chemical Code Regulations 1995*, *Part 6-Permits, Clause 57(2).* This current list of 3 permit types could simply be extended by a new permit type called 'Better Practice Permit' or similar and potentially an additional permit category for aerial application as an interim measure.

This, in combination with a clear APVMA system, could enable a user meeting certain prerequisites (such as training or industry accreditation) to use a prescribed approach to drift assessment (e.g. AgDISP modelling) to arrive at smaller buffers (for example) based on good science and a more accurate in-field assessment of conditions.

Having printed the output of the approved model or system, the user could then access the APVMA website and print out a 'standard' permit for better practice that provides a legal underpinning, relevant to all jurisdictions, for actions that are better than available from the actual label which is, as always, based on worst case scenarios, such as highest rate.

Alternatively, the APVMA proposed SDM Tool could come with the standard permit attached – again for printing and record keeping. However, the timeline for availability of this tool remains unclear.

Further simplifications could also be considered where one set-up or model run could be used for all future applications with the same parameters.

The various State/Territory control-of-use requirements for accurate assessments of conditions, record keeping etc, would all then come into play as usual, with the print-outs as above forming part of the system of record keeping required for each application - and again, as usual, being transparent for audit or investigations.

The innovation of a 'better practice' permit category would be a relatively straight forward improvement that would address the concerns of the States/Territories, while delivering to industry a strong incentive for the adoption of better practice spraying.

The need for a review of the current structure of the permit system and the policy directing it is also clear from a broader aerial application access perspective.

AAAA has been advised on many occasions by APVMA that the permit system is unable to cater suitably for aerial application because of the policy limitations of the existing permit categories.

These policy limitations on existing permit categories - being 'minor use', 'research' and 'emergency use' - seem to be quite contradictory when potential aerial uses are compared to the way ground uses are routinely approved. It may be that a review of the policy surrounding the permits may identify additional greater flexibility for APVMA than previously imagined.

Importantly, an initiative such as an aerial application permit would address the long-standing problem of products that may not have aerial on label, and because they are now 'generic', have no registrant support likely in terms of further research or development that would allow a label change.

Revised aircraft deposit curves, particularly in relation to release height

AAAA has already provided advice to APVMA regarding aircraft spray height as part of the 2,4-D suspension process and development of subsequent permits.

There is a need to take a more nuanced approach, given optimum aircraft spray release height is variable and determined by, amongst other things, the wingspan of the aircraft and its operation in ground effect – normally at a height that is around 25% of the wingspan of the aircraft.

Clearly, the size of the aircraft will have an impact on the optimum spray release height, with increased downwash from larger aircraft offsetting the higher release height.

Given the training on this issue through the AAAA's Spraysafe accreditation and the accountability of all aerial applicators through mandatory licencing by States/Territories, the removal of height requirements on label would not be an unmitigated risk, especially when combined with the modelling already done for approvals that includes a representative spray height that is already close to the 25% of wingspan figure.

Consequently, APVMA should consider removing the current height restrictions on label (generally set at 3 metres) and replacing them with a recommendation to operate the aircraft

at a spray height that represents approximately 25% of the wingspan (or rotorspan) of the aircraft – or simply leave this issue to the training and competence underpinned by Spraysafe and licencing.

An alternative approach – adopted for the 2,4-D Permit – is to provide varying spray heights (for example 3 and 5 metres), however, this creates an even more complex, duplicative label/permit and is not AAAA's preferred model.

Mandatory verses advisory buffer zones.

As AAAA has previously indicated, the use of advisory statements on labels, far from simplifying compliance, actually increases compliance risk for applicators as Courts (and some jurisdictions from experience) are likely to rely on the label as setting a standard of due diligence regardless of whether a statement is deemed advisory or mandatory by APVMA.
Consequently, applicators are likely be held to the commonly available standard on label – advisory or mandatory.
A superior solution is for the APVMA to move as quickly as possible to Stage 2 of the proposed reforms to enable applicators to have a clear head of power and a scientifically rigorous method for reducing mandatory maximum buffers that relate to use of the maximum label rate and other maximum parameters.

Further information
If further information or explanation is required in support of this submission, please do not hesitate to contact AAAA on 02 6241 2100.

Yours sincerely

Phil Hurst
CEO

Appendix 5 – AAAA Submission to Productivity Commission - 2007

Submission by the Aerial Agricultural Association of Australia Limited (AAAA) to the Productivity Commission Study into the Regulation of Plastics and Chemicals

Overview

The Aerial Agricultural Association of Australia (AAAA) represents Australia's aerial application pilots and operators.

The Association's key concerns are:

- inconsistency between jurisdictions in chemical control of use regulation
- lack of a national and State commitment to ensuring competency of all chemical applicators is linked to their access to chemicals
- APVMA's proposed approach to requiring a specific mention of aerial application on label which will unfairly limit aerial application's access to chemicals
- a complete lack of transparency and consultation in APVMA approval of chemicals and the accompanying development of label requirements
- the unlevel playing field created between aerial applicators and ground applicators as a result of a lenient approach to ground applicator licencing, training and record keeping
- the lack of a simplified national system of cross-referencing and recognition of licences, qualifications, competencies and accreditations between jurisdictions and between federal Departments
- the lack of regulation for agronomists and related consultants who play an important role in chemical application
- the lack of government funding to improve training and ongoing education of aerial applicators in support of AAAA programs

As well as addressing issues raised in the Commission's discussion paper, AAAA has provided a range of background information as part of this submission.

General Concerns

APVMA Issues

APVMA Lack of Transparency

An ongoing problem with the registration of chemicals by APVMA is the lack of transparency and the opportunity for input from the aerial application sector into specific labels.

While there are clearly commercial confidentiality considerations, the incredible inconsistency in label requirements between chemicals is a major concern to AAAA.

When whole sectors with a significant stake in safe application are not consulted in the registration of individual chemicals, there is a major flaw in the system that is reducing the quality of the outcome.

APVMA should establish, as it has promised to do for some years, a technical working group on aerial application (bound by commercial-in-confidence provisions if necessary) that can assist it with improving label statements on chemicals.

In some specific examples, AAAA has been advised by chemical companies that APVMA has made it very clear to them that a chemical registration or permit without aerial application involved will receive a much speedier treatment and 'easier ride' than one with aerial application included.

This is an unfair discrimination against the aerial application industry for no good safety, environmental or trade reason. The later section in this submission dealing with the 'myth of ground rigs and reduced drift' goes to the heart of the matter.

APVMA Proposed Drift Policy

AAAA hold genuine concern with the position of the APVMA over aerial application and spray drift, and indications that APVMA will require an overt statement on all chemical labels as to whether aerial application is or is not permitted for that chemical.

The key issue should be competency of the applicator ***regardless*** of whether that applicator is using ground, airblast or aerial application.

AAAA has played a very positive role in its relationship with APVMA over a number of years, hosting information days, making aircraft available for demonstrations and meeting regularly with senior APVMA staff and the APVMA Board to ensure they are aware of the practical implications of their regulation.

Unfortunately, the APVMA appears firmly wed to the erroneous assumption that aircraft will cause more drift than ground applications regardless of any other considerations such as the competence of the operator or the set-up of the aircraft.

It is this principle that is underwriting APVMA's position that there should be a distinct requirement for aerial application to be considered a 'higher risk' application warranting greater attention and additional research before label approval.

Any difference between aerial and ground application that can be measured in drift modelling or other work is rapidly overtaken by the greater competency of aerial applicators to make sound application decisions. In other words, the competency of aerial applicators reduces any risk of an adverse effect.

A national approach to linking competence to access to chemicals is both obvious and long overdue, and should be included on label. This should be regardless of whether the application is made by air or ground.

To single out aerial for very harsh treatment as the APVMA seems intent on doing is not only unwarranted, but likely to cause significant damage to agriculture for no real environmental outcome.

Without aerial application, widespread rust epidemic control, locust control work and the protection of tall crops such as bananas and cane and irrigated crops such as rice and cotton simply could not be achieved efficiently.

A critical impact of the APVMA requiring special mention of aerial on label will be that aerial access to generic or off-patent products will rapidly diminish as chemical companies are unlikely to invest money in a product that has little protection of their investment from other companies.

A broader concern is that this reluctance to invest in aerial application may also happen with proprietary products if the APVMA's requirements become unrealistic or impractical.

There is already a disconnect between APVMA's policy makers who insist that all will be required is some modest additional modelling, and the registration/permit area that continually makes significant additional demands of registrants if they want aerial on label.

AAAA is aware of a number of chemicals being refused for aerial application on the grounds that very detailed (and expensive) additional information is required.

APVMA has no transparency for how it might enable continuing access to aerial application, nor has it indicated how it will deal with registrants' concerns over significantly increased information requirements for products under the new APVMA drift policy.

For example, APVMA has not attempted to map out a simplified permit system for products that may be adversely affected by the "aerial specific" label requirements, so that organisations such as AAAA, if necessary, could apply for a permit and develop practical experience and data on the safe application of that product.

This is compounded by the current APVMA practice of not requiring consistency between labels or even within labels. If anything, the effect of the closed APVMA approval process is to ensure inconsistency between labels and within labels. If the product has been found to be safe on one crop in one State, why is it not approved for use on the same crop in another State? For that matter, if a product, is available for use on one type of target, why should it not be available for similar types of targets in similar cropping situations?

This is one area where simplification and streamlining would be a significant improvement on APVMA performance. Inherent in this statement is the knowledge that other State and Federal departments have a significant input into APVMA decisions, and they would also have to be brought into line to improve consistency.

AAAA's position remains that there should be no special requirements for aerial application on label other than the aerial applicator being competent through recognising AAAA's Spraysafe program as all States do.

Proposed Chemical User Accreditation and Restricted Chemical Products

There has been a proposal under discussion for some years by the APVMA to restrict access to certain chemicals to only certain users who meet competency and other requirements.

AAAA has always supported any Government moves to ensure that all applicators, regardless of ground or aerial, contractors or farmers, are trained and competent in the use of the products to which they have access.

AAAA led the way in this regard with the introduction of the Spraysafe training program for pilots in 1985.

AAAA supports the concept of access to some chemicals being restricted, depending on the level of training a person has received and the level of accountability and transparency they are subjected to through State chemical control-of-use regulation..

However, AAAA does not support the suggestion that relevant training, competency and assessment can only be provided through a Registered Training Organisation under the Australian Quality Training Framework.

AAAA believes that as a starting point, all licence holders holding suitable competency (such as all Spraysafe accredited application pilots) should be approved for access to all chemicals, including those that may be included on any APVMA restricted access list.

State Issues

State Control-of-Use Regulation Inconsistency

AAAA is concerned at the lack of relevant and timely reform of regulation of chemicals across jurisdictions.

State inconsistency adds costs to chemical applications through duplication of licencing, differing training requirements, differing record keeping requirements and differing approaches to compliance and education.

For example, despite the Federal/State Product Security and Integrity Committee and various working groups considering the issue since 2001, there is still not an agreed nationally consistent licence regime for the licencing of pilots and businesses engaged in aerial application. Each State still pursues their own licencing regime and charges.

Similarly, States have different record keeping and training requirements.

A key issue for AAAA is the ongoing lack of requirement in all States except NSW for mandatory training for all chemical applicators, including ground applicators and farmer applicators.

State by State reform of control of use regulation is disjointed and uncoordinated, with each State adopting a different philosophical approach to the management of chemical application.

The reviews in each jurisdiction take up valuable industry time, result in different compliance regimes and add to confusion and cost for the increasing number of aerial applicators that operate in a number of jurisdictions for good economic reasons.

The Anti-competitive Playing Field

A key economic and competition issue is the unlevel playing field between aerial application and ground application.

Despite State regulators publicly and consistently indicating they receive considerably more complaints and undertake more investigations regarding poor ground application than aerial application, most States continue to require licencing and high training and other standards from aerial application, but no or limited licensing, training or record keeping for most ground applicators.

All ground applicators across Australia should be required to meet mandatory training requirements to at least AQF3 standard, be licensed and be required to keep records of each application.

More information is provided under ‘Competency’ below and in the ‘background’ section of this submission.

Competency and Access to Chemicals

The key issue of safe chemical application is the competency of the applicator ***regardless*** of whether that applicator is using ground, airblast or aerial application.

A droplet doesn't know whether it came from a commercial ground operator's rig, an air blast sprayer, a farmer's ground rig or an aircraft – it simply obeys the laws of physics.

Establishing a system that would require aerial and only *some* ground operators to be competent does not seem to be robust or rational in terms of risk reduction. This is currently the case in all States except NSW.

Any difference between aerial and ground application that can be measured in drift modelling or other work is rapidly overtaken by the greater competency of aerial applicators to make sound application decisions.

In other words, the current competency of aerial applicators reduces any risk to a level below that of ground applications.

Commercial Operators Licencing

Aerial applicators cannot perform a spray job without first attaining the following:

- A CASA Commercial Pilots Licence, including significant study and examination on meteorology (minimum 175 flying hours of training, over a number of months and requiring significant additional ground training, several detailed examinations with a pass mark of 75%, a further flying test and an investment in the order of $60,000)
- A CASA Agricultural Rating, including further study and examination on meteorology and risk management training (minimum 42 hours of flying training, a written examination with a pass park of 75%, and a flying test conducted by a CASA approved specialist agricultural authorised testing officer and an investment in the order of $15,000)
- 20 hours (flying hours) of direct supervision during initial applications
- 110 hours (flying hours) of indirect supervision during subsequent applications
- State chemical distribution licence, based in all States (except WA) on the AAAA Spraysafe accreditation, which requires study of a 270 page manual and an examination with a pass mark of 70%
- A job with a licenced aerial operator, under whose supervision, company policies, CASA approved Operations Manual, CASA approved Chief Pilot and CEO, insurance, OH&S policies and other procedures the pilot must operate. Licenced aerial operators are required to have as a minimum:
  - an Aerial Operators Certificate issued by CASA after rigorous investigation of the company, personnel, qualifications and facilities. This licence covers all aspects of aviation safety, operations and maintenance of aircraft.
  - an approved Operations Manual that covers emergency procedures, normal operations, key personnel, aircraft maintenance etc.
  - an approved rigorous maintenance program to ensure aircraft are airworthy before each flight.

- a Chief Pilot, approved by CASA after a comprehensive interview, with responsibilities including oversight of safe operations and pilot management.
- regular on-site audits by CASA Flying Operations and Airworthiness Inspectors, as well as various renewals and checks of every pilot's licence, pilot medicals, and company systems.

Compare this to the requirements for a ground operator:

- In some States, a requirement to be competent at only AQF level 2 (not meant to be without direct supervision)
- In some other States, licencing for commercial applicators (not including farmers), but no competence mandated
- For farmers and their staff, no requirements (except potentially for NSW, but with little enforcement as there is no licensing)

Any training offered within the ground rig community has difficulty garnering support because there is no mandatory training requirement. Some ground application training courses, as reported at an APVMA drift management seminar, only attract 1 or 2 people when the break-even for this training is generally around 15 people. Some ground application training courses have questionable relevance to risk management, being primarily focused on calibration issues and missing important subjects such as detailed meteorology, planning and drift management.

A key issue for concern with ground application and training is the lack of a coherent national industry association that is working towards ongoing education and accreditation and professional development, as is the case in the aerial application industry.

Key steps for improving ground application standards include:

- improving the level of ground operator training to better match real world requirements by having some of the national competencies at AQF level 4 covered (especially superior knowledge of meteorology and risk management and planning) as a mandatory part of the recognition of approved courses. (AAAA's Spraysafe already exceeds this standard)

- linking chemical access to proof of competence (ie presentation of a licence, Spraysafe certificate or for ground operators a Chemcert card), preferably at the national level.

- urgent extension of the competence requirement through mandated training at least at AQF level 3 for ***all*** ground operators, not just commercial operators

Farmer competence

Farmers applying chemicals on their own land should be required to possess the same competency that other applicators (at this stage only aerial applicators) are required to have as the risk they run of causing damage outside their farm is the same as a commercial applicator.

Farmers are putting out the same chemicals in similar quantities (or greater) but without any of the education, training or licencing required of aerial applicators and often in ignorance or direct contravention of the label requirements.

All ground rig operators, including orchard and other sprayers, should be required to be licenced for the application of any chemicals, regardless of distinction between herbicide or pesticide, especially as the environmental and implications of off-target application by ground rigs are significant.

While NSW has already required this, other States have indicated they will not follow.

Agronomists and consultants

The use of agronomists and other consultants by farmers is now a standard practice across Australian agriculture.

However, the regulation of the accountability and competence of agronomists has not kept pace with their emergence as a key adviser exerting considerable influence over the outcome of a chemical application.

Agronomists have not been legally drawn into the loop of responsibility that should engage all those playing a major role in the key decisions surrounding chemical application.

The agronomists' role is often critical in chemical application – they decide the pest to be targeted and often recommend the chemical to be used, the rate of application, coverage required, and may even recommend water rates, droplet quality, equipment or drift profile – all of which subjects they may or may not have any competence in.

Many agronomists put pressure on applicators to treat the target field as soon as possible, regardless of weather conditions or drift considerations, as they feel they are not accountable or responsible for the outcome.

It is a reasonably regular occurrence that agronomists will recommend practices that are 'off-label'. In these cases, it becomes the applicators' responsibility to act as policeman – sometimes at the cost of the job.

While some States have a theoretical head of power to enable agronomists to be prosecuted for an offence should it be able to be proved that they provided advice that led to an offence, these provisions (such as in the *NSW Pesticide Act 1999*) remain untested. In other States the head of power does not exist in any overt form.

While some agronomist's professional organisations exist – such as the Cotton Consultants Association – there does not appear to be a national professional representative body for agronomists that has a code of conduct, disciplinary measures, or education or professional development programs.

To ensure that this key group of players in chemical application are brought into the loop of responsibility for safe chemical application, government should consider (in the absence of a clear commitment to self-regulation by agronomists) regulation of agronomists by mandated competencies, training, licensing and record keeping.

Loader Mixer Accreditation Recognition

In 2005, the NSW DEC introduced training regulations that extended a requirement for mandatory AQF 2/3 level training to all chemical users, including those that mix and load chemicals but who do not apply them.

Spraysafe training for loader-mixers was deemed to be non-compliant with the regulations.

AAAA recognised that people mixing and loading chemicals should have training and instituted loader-mixer training as part of our Spraysafe program some 20 years ago. That training is sector and task specific, is based on a 200 page manual, a video, a 2 hour exam and a workplace-friendly reference guide.

As with our Spraysafe accreditation for pilots, that training is not delivered by an RTO and is consequently not a DEC 'approved' course. That is essentially because we are a very low throughput industry that cannot economically sustain such a significant training infrastructure cost. In NSW, less than 12 pilots and even fewer permanent loader-mixers are trained each year.

The training we provide is specific to the task and risks, covers the essential competencies and has been delivering safe and competent staff for years.

Support staff who mix chemicals under the supervision of a licenced applicator should not be required to seek additional expensive training that is aimed at applicators rather than support staff.

For example, the competencies in an applicator's course would appropriately include risk assessment, knowledge of meteorological theory and practice, spray performance, droplet behaviour, efficacy, calibration and spray equipment etc. Spraysafe for *pilots* covers this completely and has been independently assessed at a significantly higher standard than any of the 'approved courses' (based on an independent mapping of Spraysafe against the relevant national competencies by the Rural Training Council of Australia and more recently confirmed by another review carried out by an independent consultant agreed with DEC).

However, to require this high standard of a person that only *mixes* chemicals is simply not relevant to the safe *application* of the pesticide. The competencies loader-mixers require (also covered in the pilots' accreditation) include reading the label, using the appropriate personal protection equipment, getting the rate right, proper disposal of empty containers etc.

As they do not have to apply the product, there is little point in requiring them to have a qualification and competencies designed for applicators and which loader-mixers will never use.

The AAAA was unsuccessful in its efforts to seek relief from this NSW-specific requirement.

AAAA sought assistance from Chemcert (NSW) in providing recognition of prior learning for Spraysafe accredited loader-mixers The content of the Spraysafe loader-mixer qualification was assessed by Chemcert as meeting all of the relevant competencies except for those relating to calibration of spray equipment and actual application of chemicals – two tasks that loader-mixers ***never*** perform for aerial applicators. Unfortunately, despite this very positive assessment by Chemcert, no commercial providers of chemical training were willing to provide the 'gap' training required, but rather insisted on loader-mixers completing the full course – and paying the full fee. This was an excellent example of why the AQF/RTO system is failing low throughput training sectors as a result of crass commercial pressure.

As a consequence, Spraysafe for loader-mixers in NSW is no longer promoted by the AAAA. Instead, operators and loader-mixers are advised by AAAA to undertake the less relevant commercially available courses at considerable costs and inconvenience and which do not deliver the relevant competencies to the same degree as the Spraysafe program.

The NSW government has managed to undermine a program that is actually delivering the very outcome it is pursuing, at the same time as reducing relevant and job-specific training and placing itself at odds with all other jurisdictions.

Responses to the PC Discussion Paper

Alternatives to government regulation

AAAA has proven with its Spraysafe and other programs that cooperative regulation that engages both government and industry in a positive dialogue about improving outcomes is a sound model – one that is generally superior to government-only regulation.

The power of education and training should not be underestimated for the vast majority of industry members who are committed to compliance, professionalism and due diligence.

AAAA's ongoing professional development program – the Professional Pilot Program – has seen a number of significant training and education courses delivered to Australia's aerial application pilots and operators, including aviation safety courses and a drift management course. This is backed by research work, including wind-tunnel research at the University of Queensland on spray nozzle and aircraft performance and the development of computer based calculators to assist applicators.

In addition, AAAA has been developing a comprehensive systems-based quality assurance and safety program for the last several years that is based on independent auditing, but progress has been compromised by the drought and a lack of government interest in assisting the industry to attain a higher standard of performance through supporting funding.

The success of programs such as Agsafe/Guardian and AAAA's Spraysafe should encourage government to be more open to working with industry Associations rather than simply relying on the very blunt tool of ever increasing regulation.

The negative cumulative effect of Government demands

Red tape and compliance with the myriad Government regulations that affect aerial application is a serious impediment to business. Owners and managers grapple every day with the heavy burden of the requirements of regulation that has been implemented with no thought for the overall cumulative demand on industry.

For example, the Civil Aviation Safety Authority (CASA) recently proposed a six monthly mandatory survey of the industry, despite them already holding a significant percentage of the information.

The argument was put forward from CASA that such a survey "would only take a few minutes" – but this completely misses the point. There are literally dozens of government agencies that require "just a few minutes". Overall, 'just a few minutes' makes small business owners feel as if they are working for the government rather than themselves.

The aerial application sector is required by law to keep comprehensive records of every single job, is required to keep close control of inventories, must be compliant with State dangerous goods regulations, and has to comply with fair trading requirements. Of course, many demands are different between States.

The aerial application sector is licenced for chemical application (both pilots and businesses) separately by every State and Territory, as well being required to hold licences and medical certificates from CASA. Most pilots also hold an Aviation Security Identification Card that must be renewed every few years.

And this is on top of the normal business costs associated with ASIC, ATO, OH&S, Workcover, CASA and surveys for ABS.

CASA is only one regulator. The demands of chemical regulators are equally challenging.

The cumulative effect of uncoordinated and often inefficient government demands on industry is such that industry is shouldering a burden that is not commensurate with the value the community gets from the myriad government demands on business' time.

The lack of cooperation between the jurisdictions and between each jurisdictions' own Departments is far from what the community should expect for its tax dollar.

A consistent national approach to managing the regulatory burden on industry that takes note of the total regulatory load rather than just one small part of it would be a significant improvement.

Consultation and access to technical expertise

In many cases technical expertise no longer rests exclusively or at all with regulators. However, a few chemical regulators still appear to be of the attitude that industry has a very restricted or even no contribution to make in helping regulators get a good outcome.

Industry employs many individuals with relevant expertise that could be made available to government regulators if regulators had a more open attitude and put in place systems to encourage engagement and consultation with industry.

For example, despite clear interest and enthusiasm from APVMA to form a technical working group on aerial application, such a group has not eventuated - even though such a group would significantly enhance the capability of APVMA to produce better chemical labels.

Conversely, a number of State chemical regulators work with AAAA to promote an open dialogue and use AAAA and its members as a technical information resource that leads to better policy outcomes.

However, consultation on the registration of chemicals is essentially non-existent through the APVMA, unless the AAAA or individual operators are involved in either field-testing or the development of the label by the chemical company itself. This is in contrast to the process for making input into chemicals under review by the APVMA, where there is often an ability to make a submission, or better still, to sit on a working group providing information and expertise to APVMA on the review.

Greater recognition of existing qualifications and removal of duplication

AAAA believes that the current *de facto* national recognition of Spraysafe for pilots, mixers and businesses should be further developed into a national licencing system for aerial application businesses that replaces the current duplication and costs with a more efficient system.

AAAA has been working with various PSIC working groups on this outcome since 2001 without an outcome.

There should be more ready recognition of existing licences, qualifications, competencies and skills held by pilots to ensure ongoing access to chemicals.

For example, most pilots hold an Aviation Security Identification Card that involves checks for politically motivated violence by ASIO, the AFP and DIMEA. Such a qualification/accreditation (in conjunction with CASA licences/rating and Spraysafe accreditation) should enable the holder to automatically qualify for a range of other privileges, such as access to chemicals of security concern, SSAN, the APVMA proposed restricted chemicals category etc.

Industry should not have to repeat the same or largely similar exercises several times to comply with different government requirements.

Access to information

Chemical packaging and labelling remains an issue of concern for AAAA.

Many chemicals are packaged in such a way as to almost ensure confusion between very different chemicals where labels are of very similar design and similar colours. A national system of labelling of chemical products should be introduced where drums and other containers are clearly colour coded to remove confusion.

As a considerable amount of spraying takes place at night to take advantage of better metrological conditions, the need for clarity in labelling is even more important.

For example, insecticide packaging could be colour coded red, herbicides green and fungicides blue.

In addition, the actual containers used for chemicals are often difficult to pour from without splashing and 'glugging' and the attendant increased risk to the user. A national standard agreed with industry would be a very useful starting point for improving the safety of chemicals in the field.

Another challenge for all chemical applicators is the lack of easy access to the current full label and MSDS information for the particular chemical they need information on. Many labels on drums are water or sun-damaged and quite difficult or impossible to read.

AAAA believes that a national free website should be established where users can search and access all approved labels, MSDS and permit information. Currently two State Departments of Primary Industry sell a CD based product that provides this information, complete with regular updates, however, a website would be a much better approach to ensure all relevant information is available.

Alternatively, APVMA could require all chemical registrants to maintain their own websites to provide information for their products, including full labels and MSDS, and to have that website address mandated to be printed on the chemical drums and labels. This would considerably alleviate the difficulties with keeping up-to-date MSDSs on site in hard-copy.

Background Information

The AAAA ('four As')

The Aerial Agricultural Association of Australia (AAAA) was formed in July 1958 at a meeting jointly convened by the then Department of Civil Aviation and the Bureau of Agricultural Economics.

AAAA's mission is to promote a sustainable aerial agricultural industry based on the professionalism of operators, pilots and staff and the pursuit of industry best practice.

- Membership of the AAAA consists of operators of agricultural aircraft. There are approximately 130 active operators in Australia and there is also a category for pilot members. AAAA has 75% operator membership controlling 90% of aircraft in use and is therefore representative of and qualified to speak on behalf of the agricultural aircraft industry.

- Capital investment in the industry exceeds $200 million. Agricultural aviation directly employs 2000 personnel comprising pilots, field staff, maintenance staff and administrators in non-drought periods. A further 2000 people enjoy part-time employment. The industry uses more than 300 specialist aircraft with supporting vehicles and equipment, together with established aircraft maintenance facilities throughout the country.

- The Association has its National Office based in Canberra and is governed by a Board of Directors with representation from each State/Territory. The Board is in constant consultation with the CEO and local agricultural operators and meets formally on a regular basis.

- The industry has progressed considerably in knowledge, skill and degree of professionalism since the late 1940's image of the 'crop duster'.

- Today's 'ag pilot' is highly trained and licensed under both Federal and State legislation. No other applicator of agricultural chemicals has the degree of training of the ag pilot, who is required to have a commercial pilot's licence, an agricultural rating and a chemical distributor's licence. The majority of operators and pilots are accredited under the AAAA 'Spraysafe' program.

- One of AAAA's key roles is to enhance education and professional development throughout the industry. The Association conducts a comprehensive program of conference, National Convention, training and education activities to keep members up-to-date with legislation, practices and other developments. Meetings include sectoral Air Improvement Meetings (AIMs) for rice, cotton, Far North Queensland and top dressing, State Conferences and the annual National Convention.

Government Goals and the Environmental and Economic Importance of Aerial Application

The productivity gained in agriculture and forestry through the responsible use of chemicals and nutrients applied by air is substantial. In many cases, the inherent advantages of aerial application are absolutely critical to the effective protection of crops and products.

The need to aerially apply chemicals and fertilisers to tall crops such as forestry, bananas and sugar cane and irrigated crops such as cotton and rice are important examples of where aircraft deliver a service that is simply not available from ground applications. The

restriction of aerial application would equate to very significant lost productivity if the various applications could not be made in a timely manner.

The economic costs of such lost productivity if aerial application was restricted would be in the millions of dollars through direct lost productivity and lower yields, with the knock-on effects of lost employment, damage to crops, falling soil fertility etc even greater.

The environmental costs would also be significant as it could be expected that as more chemical would be applied by unlicenced and generally unregulated ground applicators, the risk of drift and other chemical contamination (such as from spills due to more mixing sites being required) would also increase.

Importantly, the high level of training of pilots and support staff in the aerial application sector should provide government with significant comfort that chemical application is in the hands of professionals who are dedicated to sustainable agriculture and forestry practices.

Some additional advantages of aerial application include:

- Aerial agriculture protects Australia's environment by ensuring that the application of chemicals is undertaken by highly trained professionals who are fully accountable to government regulators.

- Aerial agriculture is very cost efficient - aircraft cover large areas quickly, the aircraft is the most efficient application platform and it has unique and significant advantages over ground application.

- Air ag employs about 2000 people across Australia in a 'normal' season - including pilots, loader/mixers, aircraft engineers, and support staff. We make a significant contribution to rural communities in addition to our work for farmers.

- Ag pilots are well educated and trained about drift management and the efficacy of chemicals. They understand the importance of making the chemical work for the farmer, but they also understand the importance of not drifting outside the target area, and they have a number of tools to assist them with this, including nozzle calculators, computer drift-modelling, highly flexible aircraft set-ups, the use of buffers, ensuring the wind is blowing away from any sensitive areas, changing the size of droplets to match conditions and delaying sprays until more favourable conditions.

- Drift management is a central feature of the training and ongoing education of ag pilots. All ag pilots understand the importance of the droplet spectrum coming out of the spray boom and all ag pilots know how and when to change that spectrum to suit particular conditions. The main decision operators and pilots face every day is how they can safely carry out sprays in the conditions they have using the variable equipment settings and techniques available. AAAA’s latest training program – the AAAA Drift Management Course – is currently being delivered to Australia’s ag pilots based on the most recent research and international best practice.

- Ensuring due diligence is a critical part of aerial application. Each pilot must ensure that they have assessed each spray job to control drift, that they have delivered the chemical to the target pest or weed, and that they can do it all safely.

- Ag pilots are professionals - they have a big investment in education, they undertake ongoing training, they are multiple licenced and heavily regulated - and they are committed to their industry and their clients.

- Aerial ag operators use only APVMA approved chemicals in accordance with label directions.

- Very detailed risk management based planning for each job that protects environmentally sensitive areas.

- The use of aerial ag reduces the number of people involved in the application of chemicals and thereby reduces the exposure of workers to the chemicals used.

Key Benefits to farmers, agriculture, forestry and consumers

- Air ag is unaffected by wet ground. Ground rigs are dependent on dry ground.
- Air ag is unaffected by crop canopy closure. Ground rig use after crop canopy closure is likely to lead to damage of the crop and a yield loss of around 5%.
- Air ag can apply over tall crops, including forestry, accurately, efficiently and safely.
- Great speed to cover large areas - ground rigs would take days or even weeks to cover what it takes air ag hours.
- Reduced exposure to weather variations - able to take greater advantage of short weather windows - less likely than ground rigs to be spraying in poor conditions.
- Improved efficacy - aircraft utilise disturbance of the crop from wake turbulence to ensure good penetration of chemicals into the crop and better coverage.
- No disease transfer as the aircraft does not touch the crop
- No soil compaction.
- No trampling of the crop like tractors, spray rigs or quads.
- Over $20 million invested in research into controlling spray drift by the US EPA and Dept of Agriculture and chemical companies alone over the last 10 years. AAAA and operators have access to this research.
- All pilots have a solid understanding of the theory behind droplet behaviour as part of their agricultural rating, Spraysafe qualifications and ongoing professional development.
- Australian operators invest tens of thousands of dollars each year in pattern testing, a process that ensures their aircraft are set-up in the most efficient and productive way to give the least drift and best efficacy.
- A professional industry available for emergency services use - fire fighting, oil spills, plague control.
- A significant employer in rural and regional Australia.
- A ready pool of highly experienced low-level qualified pilots.
- A provider of aircraft maintenance services for general aviation across regional Australia.
- A key partner in ensuring farmers have access to world class technology.

The myth of ground rigs and reduced drift

In terms of ground rig operations, there is little doubt that any inherent 'advantage' the ground rig may be perceived to have over aircraft in terms of propensity to drift is quickly offset by the current poor level of education of ground rig operators in terms of meteorological conditions and other vital factors affecting spray operations.

In addition, the ground rig takes far longer to cover an area than an aircraft, the result being they are exposed to deteriorating and varying meteorological conditions if they spray during the day, and probable surface temperature inversions if they spray throughout the night.

These factors completely erode any distinction that should be drawn between ground rigs and aircraft for the purposes of setting regulation.

In addition, as more and more ground rigs are used, this will considerably lift the overall number of people involved in the handling and application of chemicals over a longer period of time, increasing overall industry health exposure risks. This is a critical problem if education and safety standards are not up to a level commensurate with the safe handling of chemicals.

Aerial application is not a higher risk

AAAA totally rejects any claims that simply because a chemical is applied from the air that it is a higher risk application.

AAAA also rejects the concept that by its very nature an aircraft is more susceptible to drift than a ground rig. The real issue is how either spray platform is set-up and operated. There are plenty of examples of spray drift occurring from ground rigs and to ignore this fact is to simply develop policy that is meaningless and ignorant of the real life experience of regulators, insurance companies, farmers and applicators.

By making aerial application an automatic increased 'risk' category in chemical registration ignores the fact that pilots are better trained than other applicators, operate in a more disciplined environment thanks to aggressive control-of-use legislation, State enforcement and insurance company regulation, are fully accountable for their actions due to strict record keeping requirements, are highly visible and generally operate from fixed bases that can easily be subjected to investigation and audit.

The real issue is whether the applicator, regardless of being aerial or ground based, is competent, has read and understands the label, has carried out a risk assessment, has an application management plan including appropriate spray platform set-up, and monitors conditions to ensure they stay within their application plan.

The Spraysafe Program

Spraysafe - a professional education and training program

Spraysafe was initiated in early 1985 when AAAA convened a meeting in Canberra with aircraft operators, chemical companies, the Departments of Primary Industries, Agriculture, Environment and conservation groups. At this meeting it was identified that the agricultural industry needed an initiative to establish increased professionalism and a framework for continuing improvement in the application of agricultural chemicals by aircraft.

Spraysafe today

AAAA regularly reviews the Spraysafe program to ensure it remains a relevant program that continues to enjoy the confidence of clients, related industries and government regulators. Input and support for reviews is solicited received from State regulators (the relevant Departments of Ag./ Primary Industry/ Health or EPAs), APVMA, Agsafe and others with an interest in our industry.

In summary, Spraysafe features:

- different requirements for accreditation for operators, pilots and loader/mixers
- an independent audit for operators to be accredited
- a surveillance audit program for operators
- re-qualification requirements following loss of accreditation for operators
- a requirement to advise AAAA of any significant change to activities
- triennial renewals for operators
- triennial renewals for pilots, with the option of resitting and exam or proving compliance with the AAAA Professional Pilot Program
- manuals for operators, pilots and loader/mixers
- a training video and summary manual for loader/mixers
- examinations for pilots and loader/mixers for initial issue
- an ongoing Spraysafe promotional program

Spraysafe accreditation at all levels is open to AAAA members and non-members alike, although the fee structure reflects the ongoing contribution to AAAA activities of our members.

Accreditation Levels Under Spraysafe

Accreditation of Operators

Operators are required to meet stringent guidelines in order to achieve Spraysafe accreditation, including a full independent inspection of the operators' facilities.

Initial accreditation requires the completion of an independent evaluation of the facilities and systems of the company against the AAAA Spraysafe checklist.

Renewed accreditation requires the completion of a triennial self-assessment checklist.

These self-assessments are supported by a surveillance audit program that audits approximately 20% of accredited operators each year.

Accreditation of Pilots

Agricultural pilots are required to have a comprehensive knowledge of industry-related issues and practices. Pilots are examined on their knowledge of the 270 page *"Pilots and Operators Manual"* with a two hour exam. This exam is externally supervised, returned to and marked by the AAAA office. The pass rate required is 70%, and upon successful completion of the exam a certificate is issued to the pilot. To date, over 700 pilots have successfully completed the Spraysafe exam since 1985.

The examinations are currently under review, with new examinations likely to be introduced next year. They will feature a higher pass mark of 75%, compulsory-pass case studies and a wider range of updated questions, and will be cross-referenced to both the Spraysafe Manuals and the national competencies.

The pilots Spraysafe accreditation has a validity of three years, at which time the pilot has to either sit an examination for renewal or prove compliance with the AAAA Professional Pilots Program.

Accreditation of Loader / Mixers

In order to facilitate correct procedures on the ground, loaders and mixers (ground support staff) have been assisted with the correct methods of handling chemicals via the second manual produced by AAAA, the *"Chemical Handling Manual for Agricultural Aviation"*. The loader / mixers are tested on their knowledge of this manual, examined for two hours and receive certification upon successfully completing the exam. The pass rate is 70% and over 130 have been accredited.

Other Issues

Both the *"Pilots and Operators Manual"* and the *"Chemical Handling Manual"* were comprehensively reviewed and updated in 1998 by the University of Queensland's Centre for Pesticide Application and Safety (CPAS).

AAAA is currently reviewing the Manuals to ensure their relevance. AAAA anticipates adding further drift management material to the manuals, especially when the drought breaks and resources permit, given there is no Government interest in supporting such an improvement.

AAAA rewrote (with CASA support) the Aerial Application Manual for Application Pilots in 2005. This is now a world-leading publication on aerial application that incorporates risk reduction, due diligence and human factors with the hard-won experience of aerial applicators. All aerial application operator and pilot members of AAAA were sent a copy.

A further initiative of the Association under Spraysafe has been the education of our clients - farmers, farm advisers and consultants. Farmers and agronomists need education regarding correct aerial application techniques to ensure that no agricultural pilot or operator is pressured into applying chemicals under adverse or unsafe conditions.

AAAA recently developed and is now delivering a new course for aerial applicators, agronomists and clients on Drift Management. This is another on-the-ground education program that is delivering important information to users and again which is being delivered without Government support.

In summary, the Spraysafe program is aimed at ensuring applicators, pilots and support staff meet agreed standards in a number of key areas. The Spraysafe program is a significant education program for the continued professionalism of the industry and has excellent support from all levels of the industry.

Spraysafe Pilot Accreditation relationship to the AQF

The practicalities of delivering a very specialised, very low throughput training and assessment program (about 20 pilots nationally in 2006) to often remote areas where pilots are based, should lead to a fundamental recognition of the value and success of Spraysafe.

The pilot accreditation component of the Spraysafe program was independently reviewed by the Rural Training Council of Australia in late 2001, and the independent consultant found that the Spraysafe program, when mapped against the national competencies for chemical application, covered 100% of AQF level 3, 90% of AQF Level 4 and 40% of AQF level 5 competencies.

The assessment component of the pilot accreditation was also independently reviewed in cooperation with the NSW Department of Environment and Conservation in 2004, and the independent consultant (formerly the Head of Education for the EPA) made a series of recommendations to improve the assessment component of the program that AAAA is implementing.

The more recent independent review also found that the pre-existing qualifications and competencies gained by pilots before Spraysafe accreditation probably push the program's real performance even higher in terms of meeting the national competencies, especially in terms of risk assessment and skill in assessing meteorological conditions.

The more recent independent review identified that there are a whole range of relevant aircraft handling, risk management, meteorological and related competencies that aerial application pilots are trained in and which are continually reviewed as a result of their CASA licences.

Importantly, the independent consultant also found that:

> "Loading such a low throughput training program with the full costs and protocols associated with AQF / RTO system would potentially lead to the collapse of the very system that is delivering very useful and relevant training in this industry. Self directed training through the use of the manual and through appropriately supervised, local assessment processes represents the only way that training can continue to be sustainable in this sector."

On the basis of these independent reports, NSW continues to recognise Spraysafe as the *de facto* national competency standard for aerial application, as does every other State with the exception of WA (although they rely on licences issued in other States on the basis of Spraysafe accreditation). AAAA understands that the WA situation is as a result of limitations of current legislation which have been slated for change for the last 5 years.

Spraysafe is an excellent program that is delivering exactly the outcomes that government and the community wants.

Weaknesses of the AQTF

The myth of portability

The AQF, national competencies and RTO system was developed to aid industry through improved portability of qualifications so that a qualification, once attained from any one jurisdiction, could be recognised in any other jurisdiction.

However, a major failing of the AQTF is its high cost, heavy burden of paperwork and its irrelevance to highly specialised, low throughout training such as that provided by AAAA under the Spraysafe program.

This is especially true where there is no relevance of the 'portability' argument in terms of movement between sectors, as is the case with aerial application. Pilots do not generally move to other sectors or even to ground application where the competencies they are trained in are relevant.

Economic reality and low throughput

RTO's are not interested in being involved with a program that does not make them money.

Spraysafe is essentially provided on a break-even basis as a support service to members and to try and ensure that all pilots have the relevant training they need to carry out their jobs safely and effectively.

In the case of training for aerial application pilots for example, throughput in recent years has been as low as 20 pilots per year, with the average over the longer term being about 40 per year. That is a national figure that when compared to the 30,000 people put through Chemcert training each year gives some sense of perspective to the training task.

To put it bluntly, forcing the full AQTF system with all of its incumbent costs on to low throughput training programs is only likely to lead to their demise.

Distance issues

Many of the pilots trained through Spraysafe are located in rural and remote areas, adding a further degree of complexity to providing relevant training in a timely manner at affordable cost – both to the pilot and to the Association.

The current method of Spraysafe training and assessment is working well, is robust and secure and fulfils the outcomes required by government in terms of relevance to the national competencies.

AAAA's Professional Pilot Program

In 2002, AAAA initiated a world-class professional development program through the AAAA's Professional Pilot Program (PPP).

This introduced a validity period on the pilot's Spraysafe accreditation of three years (superior to the five year life of a Chemcert qualification), and requires pilot's to either resit an examination before the expiry date of their accreditation, or prove to the AAAA that they have gained 15 education credits from approved courses or activities under the PPP.

The latest independent review of the Spraysafe program also comprehensively considered the role of the PPP and its importance to ongoing professional development and maintenance of competency standards. The independent consultant found that the PPP was a very appropriate mechanism to ensure ongoing maintenance of standards.

Some key issues that all jurisdictions could usefully pursue include:

- maintaining national recognition of Spraysafe for pilots chemical distribution licences.

- stepping up the work with other State regulators to develop a sensible national chemical control of use licence for aerial application that is based on recognition of the Spraysafe pilot's accreditation.

- Giving consideration to the introduction of a requirement that all aerial operators are ***either*** Sprayafe accredited (ie at the operator level of accreditation in addition to the pilots level of accreditation) ***or*** are able to demonstrate to the regulator that they can achieve the same or higher standards.

  AAAA already has this arrangement in place with Victoria and Tasmania. In Tasmania it is a condition of licencing for aerial operators to be Spraysafe accredited, although the Victorian model is superior (ie either recognising Spraysafe or evaluating the company as having achieved an equivalent standard). AAAA is only too happy to make its Spraysafe checklist and auditor's guide available to all States and Territories.

  The reason this is an important change is that the risk of AAAA being sued for loss of income is real should AAAA remove or not renew an accreditation on the basis of non-compliance or, more likely, try and increase standards through Spraysafe that some operators either can't or won't comply with.

  Allowing operators the opportunity to demonstrate they can achieve a similar standard without having to actually be Spraysafe accredited would free up AAAA to raise the standard of Spraysafe even higher.

Further Information

If you require any further information on this submission or anything to do with aerial application, please do not hesitate to contact AAAA's CEO Phil Hurst on 02 6241 2100.