

Aerial application: Still innovating

By Phil Hurst, AAAA

Aerial application has always been an 'early adaptor' to new technology and better thinking and this continues to be the case.

Spraying is a compromise between efficacy and drift control regardless of whether the platform is an aircraft or a ground rig.

The latest innovations in aerial ag are set to make another quantum leap in terms of control, efficacy and service to growers.

Spray quality control during flight, improved mapping, real-time weather information in the cockpit, web-based nozzle performance calculators and variable rate technology are just some of the innovations that will be making a difference this season.

Aircraft set up and management

Millions of dollars in research has been spent in the US and Australia on securing a better understanding of aircraft spray dynamics and this research has pointed to the importance of controlling small droplets and keeping them out of the aircraft wing-tip vortices and other turbulent areas.

Growers and agronomists are now seeing aircraft with 'dropped booms' to ensure that nozzles and atomisers are producing droplets in clean air, thereby reducing 'fines' that may be more liable to drift.

This has been augmented by new nozzles and atomisers that have achieved a reduction in the production of smaller droplets, while still generating sufficient medium droplets to ensure good coverage and efficacy.

And while the hardware is important, it is still people that will have to manage every application.

Chemical application is a team effort, and this is now reinforced by legislation in NSW (Queensland already had similar provisions) that makes it an offence for anyone to attempt to coerce an applicator — either ground or aerial — to make an application against their better judgement or outside the label.

Training and education

Good training is a key part of professionalism, and the aerial application industry has made significant advancements through the Spraysafe and related education programs.

The industry has initiated a Professional Pilots Program, now in its second year, which ensures that aerial application pilots have access to the latest information and technology.

In conjunction with the Cotton Consultants Association, the Aerial Agricultural Association of

Australia ran two aerial spraying workshops in June featuring one of the leading experts in aerial application, Dr Dennis Gardisser from the University of Arkansas.

The spray days were well attended and helped agronomists understand both basic and advanced principles of aerial application and how aerial application can deliver a great result for growers. They were also introduced to aircraft pattern testing and analysis and shown what a difference aircraft set-up and operation can make to a spray result.

AAAA will also be running its annual Cotton Aerial Improvement Meeting (Cotton AIM) at Wee Waa on October 23–24. Agronomists and growers are most welcome to attend but you will need to register with the AAAA on 02 6262 5224.

Your aerial application checklist

- AAAA Member.
- Spraysafe 2003-05 Accredited.
- Pre season meeting to discuss issues.
- Standard spray order forms in stock.
- Field maps up to date.
- Hazards such as powerlines, susceptible crops, and environmental areas all clearly identified and discussed with operator.
- Crop inspections/agronomy planned to give sufficient time and flexibility for treatment.
- Contingency (especially bad weather) plans in place.
- Discussed particular chemical requirements with agronomist and operator.
- Job ordered early on standard form.



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