

Practical implications of 2,4-D changes: It's all about the drift

THE action by the APMVA concerning 2,4-D (see previous article) was taken in response to widespread damage over several years to sensitive crops, such as grapes, horticultural crops, summer pulses and cotton. The APMVA permit will stay in place until the finalisation of the 2,4-D review. Public consultation on the review is expected to start later this year.

Under the permit there are changes to the 'directions for use' for 2,4-D including: changes to application technique, spray quality, timing and the observance of mandatory no-spray buffer zones, as well as increased requirements for detailed record keeping.

Industry spray specialist Bill Gordon, who has done extensive work on best practice application, has helped develop the latest GRDC guide to 2,4-D use, for those working in the paddock.

Bill said it was important to understand the new changes were primarily targeted at drift mitigation and did not restrict any other aspects of the current approved use patterns as detailed in the new permit (replacing the original product labels).

But he said the key changes for using 2,4-D under the permit include:

- Applicators must now use at least a Very Coarse (VC) spray quality;
- When using a boom sprayer, boom heights must be 0.5 metres (or lower) above the target canopy; and,
- Downwind buffers now apply (typically less than 50 metres, subject to rate and product being applied) between application sites, downwind sensitive crops and environmentally sensitive aquatic areas.

Bill said the new permit also included an advisory statement for 2,4-D use in cereals, fallow and pasture from October 1 to April 15. These statements advise operators to use an Extremely Coarse (XC) or Ultra Coarse (UC) spray quality and to take steps to mitigate the risk of spray drift such as adopting increased water rates and slower application speeds.



The GRDC has developed a drift reduction guide for spray operators explaining how new restrictions to the use of 2,4-D will impact on-farm applications. (PHOTO: GRDC)

Additional record keeping

"Additional record keeping is also required under these changes, so operators now need to update spray records, with greater detail, within 24 hours of application and to keep these records for a minimum of two years," he said.

"The permit also includes clearer instructions to help identify temperature inversions to reduce off-target spray risk.

"I would advise operators to watch for weather changes and stop spraying immediately if a surface temperature inversion develops or conditions become unsuitable for any other reason."

New nozzles needed

Bill said the changes would mean many spray operators would have to buy additional sets of nozzles to meet the new requirements for VC, XC or UC spray quality.

"In practical terms, many low-pressure air induction nozzles, such as the Teejet AIXR or Hardi Minidrift, are not able to produce VC, XC or UC droplets at useful pressures in the nozzle sizes most commonly used, which range from 02 (yellow), 025 (lilac) and 03 (blue)," he said.

"Therefore, many spray operators will need to change to high pressure air induction nozzles, such as the Hardi Injet, Teejet TTI or TTI-60, or the Agrotop TD-XL-D.

"Operators are encouraged to contact their suppliers well before starting spray activities to secure the supply of their nozzle requirements.

"These nozzles should be operated at pressures above 4 bar (ideally 5–6 bar), so their use may require increasing application volumes."

Pulse Width Modulation Systems

If spray operators are using Pulse Width Modulation Systems, Bill said there were several options to ensure they were meeting the new permit requirements.

"Very coarse spray qualities can be achieved on Pulse Width Modulation systems using Wilger MR-04 or SR-06 nozzles at pressures below 2.4 Bar. Other nozzle sizes may be appropriate if using the Wilger DR nozzle types," he said.

"To obtain XC or coarser spray qualities, operators should check with their suppliers on the availability of newer nozzle models that are suitable for this purpose."

Application volumes

Bill said operators would also need to consider adjusting application volumes when using coarser spray qualities.

"When increasing the droplet size, it is important to consider increasing the total application volume to maintain coverage and efficacy," he said. "In low stubble environments a minimum of 70 litres per hectare has been shown to provide acceptable efficacy when using XC spray qualities. In heavier stubbles this may need to be increased to 80 litres per hectare or more."

Bill said there were additional state and territory restrictions which spray operators and growers must adhere to which may include restricted areas and times of use. Operators are advised to check with their relevant state authority for details.

More information is available from the new GRDC Fact Sheet 'Maintaining efficacy with larger drops' at <https://bit.ly/2IT3IND>. For more information about best practice spray application go to <https://grdc.com.au/spray-drift> ■