



**NORTHERN**

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# **GRDC™** **GROWNOTES™**



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# **DURUM**

## **SECTION 6**

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## **WEED CONTROL**

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PRE-EMERGENT HERBICIDES | POST-PLANT PRE-EMERGENT HERBICIDES  
| HERBICIDE TOLERANCE RATINGS, NATIONAL VARIETY TRIALS (NVT) |  
POTENTIAL HERBICIDE DAMAGE EFFECT

## SECTION 6

## Weed control

 More information

[C Preston, S Kleemann, G Gill \(2016\), Coupling pre emergent herbicides and crop competition for big reductions in weed escapes.](#)

[R Daniel \(2016\), Pre emergent herbicides: part of the package for FTR management?](#)

[M Street, B O'Brien \(2016\), Report on the 2014 GOA herbicide resistance survey.](#)

[R Llewellyn, J Ouzman, A Mayfield, S Walker, D Ronning, M Clark \(2015\), Weed management as a key driver of crop agronomy.](#)

[S Goss, R Wheeler \(2015\), Using crop competition for weed control in barley and wheat.](#)

 More information

[www.apvma.gov.au](http://www.apvma.gov.au)

For more information, see the *GRDC GrowNotes WHEAT (Northern region)*, Section 6: Weed control.

### 6.1 Pre-emergent herbicides

Durum wheats can compete well with weeds, but strong weed competition reduces yield. Good weed control is essential to make full use of stored summer rainfall, minimise yield losses, and prevent weed seed contamination at harvest. This can be achieved effectively by controlling weeds well in preceding crops and fallow, rotating crops, growing competitive durum crops, and the judicious use of herbicides. It is important to control weeds such as New Zealand spinach, climbing buckwheat (black bindweed) and Mexican poppy, as their small black seeds can be difficult to remove from the grain, affecting consumer acceptance.<sup>1</sup>

### 6.2 Post-plant pre-emergent herbicides

When selecting a herbicide it is important to know the weeds present, the crop growth stage, the recommended growth stage for herbicide application, and the herbicide history of the paddock. Weeds should be sprayed while they are small and actively growing. It is important to rotate between herbicide groups to prevent weeds developing herbicide resistance. Herbicide labels should be read carefully before use. Research has found that durum cultivars differ in their tolerance to herbicides registered for use in durum wheats.<sup>2</sup>

### 6.3 Herbicide tolerance ratings, National Variety Trials (NVT)

Durum wheats can be more sensitive to some herbicides commonly used safely in bread wheat. Refer to the latest information on varietal tolerances and the product label.

Varietal tolerance information is included in NSW Department of Primary Industries (NSW DPI) publication [Weed Control in Winter Crops](#).

<sup>1</sup> DAFF (2012) Durum wheat in Queensland. Queensland Department of Agriculture, Fisheries and Forestry, <http://www.daff.qld.gov.au/plants/field-crops-and-pastures/broadacre-field-crops/wheat/durum-wheat>

<sup>2</sup> DAFF (2012) Durum wheat in Queensland. Queensland Department of Agriculture, Fisheries and Forestry, <http://www.daff.qld.gov.au/plants/field-crops-and-pastures/broadacre-field-crops/wheat/durum-wheat>

## More information

[G Brooke, C McMaster \(2016\), Weed control in winter crops 2016.](#)

[J Cameron, M Congreve \(2016\), Recropping issues with pre emergent herbicides.](#)

[L Van Zwieten, M Rose, P Zhang, D Nguyen, C Scanlan, T Rose, G McGrath, T Vancov, T Cavagnaro, N Seymour, S Kimber, A Jenkins, A Claassens, I Kennedy \(2016\), Herbicide residues in soils – are they an issue? \(Northern\).](#)

## 6.4 Potential herbicide damage effect

Timely and correct application of herbicides is essential. Seek local advice from advisers/agronomists and follow label directions. Good weed control is essential, as strong weed growth will compete with the crop for available moisture and nutrients causing yield reduction.<sup>3</sup>

A range of broadleaf and grass herbicides is available for weed control in durum wheat crops, as are listed in the recent publication from NSW DPI 'Weed control in winter crops'. This publication, together with advice from your agronomist/adviser, will assist with the choice of the most appropriate and safe products and their respective application procedures. The law requires that all chemical labels be read carefully before the product is used. New products and product formulations may have changed safety margins. Manufacturers or their representatives should be consulted for the latest usage information, especially if mixing chemicals or other products (e.g. zinc sulfate heptahydrate). The effectiveness of certain chemicals can be adversely affected when mixed with other compounds. Zinc sulfate heptahydrate can coagulate certain chemicals, with the coagulant causing major blockages in spray equipment, which can be difficult to clear.<sup>4</sup>

Where herbicide residue may remain in the soil, avoid the use of herbicides from the same mode of action group in following crops. Where a herbicide is applied on top of another existing herbicide a potentially damaging residual situation may arise or be made worse.

Good agronomic practice that promotes early crop health and vigour can assist in overcoming some low-level marginal damage. While any level of herbicide damage or setback to a young crop may potentially lead to a yield loss or change in phenology, and therefore should be avoided), it is not uncommon for crops suffering from low-level herbicide damage in the early vegetative phases of growth to compensate and yield well despite their early setback. Growers relying on the crop's ability to compensate and grow out of early damage are, however, taking a significant risk. For more information on herbicide injury, download GRDC app from your favourite app store or visit [www.uteguides.net.au](http://www.uteguides.net.au).<sup>5</sup>

<sup>3</sup> J Kneipp (2008) Durum wheat production. NSW Department of Primary Industries, <http://www.nvtonline.com.au/wp-content/uploads/2013/03/Crop-Guide-NSW-Durum-Wheat-Production.pdf>

<sup>4</sup> R Hare (2006) Agronomy of the durum wheats Kamilaroi, Yallaroi, Wollaroi and EGA Bellaroi. Primefacts 140, NSW Department of Primary Industries, [http://www.dpi.nsw.gov.au/data/assets/pdf\\_file/0007/63646/Agronomy-of-the-durum-wheats---Primefact-140-final.pdf](http://www.dpi.nsw.gov.au/data/assets/pdf_file/0007/63646/Agronomy-of-the-durum-wheats---Primefact-140-final.pdf)

<sup>5</sup> J Cameron, M Congreve (2016), Recropping issues with pre emergent herbicides. <https://grdc.com.au/RecroppingIssuesWithPreEmergentHerbicides>