

## Care with cereal fungicide MRL's this season

Most cereal fungicide sprays are likely to target the 'money' leaves produced during stem elongation – the flag, flag-1, -2 and -3 leaves. In barley, some sprays will be applied at GS49 to the flag sheath – a significant source of photosynthate in that crop.

Later sprays will, from time-to-time be economically viable – including when the head has emerged and later in the crop's development. Late spraying can also be effective on diseases such as stem rust and diseases that directly threaten the head or the flow of synthate during grain fill.

Late sprays nearer to harvest and multiple applications of fungicides will require users to be vigilant and adhere to product label use patterns to ensure that maximum residue limits (MRL's) are not exceeded.

Exceeding an MRL can have legal implications for those involved. It can affect the ability to sell the crop as well as damage the reputation of the grains industry as a whole.

One example of how a grower could get into trouble would be if they were unaware that:

- many fungicides have a withholding period leading up to harvest - this defines how late a spray can be applied,
- many fungicides also have a maximum number of applications and/or a maximum amount that can be applied to the one crop.

With current fungicide costs being quite low, there is the temptation to add some fungicide when a boom is going over the paddock for other reasons. Not only does this ramp up selection for resistance in some diseases, it also can potentially limit options that can be used later in the crop when the 'money' leaves are out.

One example is with the commonly used fungicide tebuconazole. For the 430 gai/L formulation (eg Folicur® 430 SC) the maximum that can be applied per crop is 290 mL. This could be as one spray at this rate, or two sprays at the lower label rate of 145 mL. If growers use more than 290 mL, they may exceed the MRL.

As harvest approaches, growers must also be aware of the five week withholding period for 430 gai/L formulations of tebuconazole.

Tebuconazole is present in a number of products and the use of high rates of tebuconazole earlier in the season will place some restrictions on what can be used later in that crop. An example of this is Bayer's Prosaro® - a mix of prothioconazole and tebuconazole. Prosaro is particularly effective on a range of cereal diseases – including some later season cereal diseases. However, if the crop has already been treated with 290 mL of tebuconazole, Prosaro could not be used as the total volume of tebuconazole applied to that crop has already been reached.

**If advisers would like to attend a training workshop on Cereal Foliar Disease Management (project number ICN00010) please contact John Cameron on Mob: 0427 209 709 or email [john@icanrural.com.au](mailto:john@icanrural.com.au)**

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## Re-thinking farm management is needed for problem weeds

The key message from Paul Castor's presentation at the Goondiwindi GRDC Grains Research Update in August was that if they haven't already done so, growers are going to have to increase their spray equipment capacity in response to the growing problem of hard to kill weeds such as glyphosate-

resistant barnyard grass, fleabane and feathertop Rhodes grass.

“Growers are generally spraying more, cultivating more and working twice as hard to control these weeds.

“In recent years, most of our clients have increased their spraying capacity. Those that haven’t are generally finding that grass weeds are having a major impact on their following crop yields” said Mr Castor.

“10 years ago we would promote to clients a target spraying capacity to be able to cover their fallow area in 7 x 8 hour days (56 hrs).

“For example if farming 5500 hectares, with 20% sown to summer crop, the maximum fallow area would be 4400 hectares. To cover this within 56 hours of spraying, 78 hectares/hour is the target capacity. Assuming a ground speed of 16 km/hr, a spraying width of about 49 metres would be needed. We were roughly covering that 10 years ago with 2 x 24m linkage booms.

“Now growers have to factor in a percentage of their fallow area as double knock. For example having to apply a double knock on 30% of the area means a 30% capacity increase is required. Added to this is the need to utilise residual herbicides which often need to be put out in front of rain as some are not UV stable and require rain to wash them in. We generally have confidence with weather forecasts only out to 4 days meaning growers ideally need to cover all their fallow area in 4 days. The result is a 76% increase in the spraying capacity required compared to 10 years ago.

“We have discussed with our clients ways to increase their spraying capacity. Options considered include more linkage booms (requiring more drivers, and labour is an issue), so most have gone wider and faster with 36 or 48m booms – that leads to problems with trees and melon holes and speed can affect the efficacy of some products. Self propelled booms have increased, but they are expensive, dedicated spray equipment. To get higher speeds from self propelled rigs, we need to go to 3m wheel spacing where previously growers were on 2m spacings. In effect we are seeing a change in farm layout as a result of problem weeds.

“There has also been changes in farm layout to accommodate the improvements in spray efficiency. Wider and faster booms require more room, so there are quite a few growers pulling old fence lines out to try to increase their management unit size,” said Mr Castor.

*Further information:*

**Paul Castor, 0427 712 003,  
paulcastor@mcagoondi.com.au**

## **Atrazine resistance in wild radish in WA a wakeup call for the north**

There has been a lot of press recently in the northern region about glyphosate resistance, but be aware that resistance in weeds with a long-lived seed like wild radish (as demonstrated in WA) could pose a whole new level of complexity in our management. We don’t get a lot of radish in the northern region, but we do have other brassica weeds, so the WA results are a wakeup call for northern growers and advisers to be vigilant in their management of ‘weed escapes’ on a range of weed types and ensure the use of integrated weed management strategies to reduce the selection pressure on any one herbicide.

At least two populations of wild radish resistant to triazine herbicides (eg. atrazine / simazine) were discovered in the Geraldton area in July 2011. The two populations that were found were sown to canola this year. Both populations had 4 L/ha atrazine + crop oil applied post-emergent. The resistant wild radish showed no symptoms at all to this herbicide application. Both populations are from paddocks with long cropping history with similar triazine history to many other paddocks in the region. Since these populations were found, several additional populations with suspected resistance have also been identified.

In isolation from other forms of herbicide resistance this would not be such an issue. However most populations of radish in this region are already resistant to Group B herbicides (e.g the sulfonyl ureas) as well as being resistant to Group I phenoxy herbicides such as 2,4-D.

The growers are reviewing their overall weed management plan to determine what non-herbicide weed management tools can be included in their farming system such as weed seed collection or seed destruction techniques.

In these situations it is important to be on the front foot and take an aggressive approach to the problem and ensure that ‘weed escapes’ which can lead to a blow out in weed seedbank numbers are not tolerated. The first step is knowing that you have a problem – which requires vigilant monitoring and management of weeds that survive herbicide sprays and testing to know what products still work.

*Further information:*

**Peter Newman, 0427 984 010,  
peter.newman@agric.wa.gov.au**

## Desiccating Crystal<sup>®</sup> mungbeans – tips to get it right

Effective desiccation remains a critical part of Mungbean production, harvest and grain quality. The desiccation of large actively growing plant types such as 'Crystal<sup>®</sup>' has presented some difficulties, especially when there is excess soil moisture. Commonly these crops have a recent flush of new flowers.

Glyphosate (i.e. Roundup PowerMax<sup>®</sup>) is the preferred product for desiccation of mungbean. According to Pulse Australia northern development manager, Gordon Cumming, at the recent GRDC Grains Research Updates, "Producers can take several simple steps to ensure maximum efficacy is achieved.

"The most important action is to use water of the highest quality available. If required, water conditioners should be used to buffer the pH to <5.0. The addition of ammonium sulphate at 2% (w/v or v/v) can increase efficacy. Correct boom spray setup and calibration are also essential steps.

"Spray timing is also important. If plants are stressed the herbicide will be less effective as less is taken into the plant. When spraying in summer avoid the heat of the day. If there is dew, you can often spray on a rising dew, but avoid spraying on a falling dew as this is more likely to cause spray to run off the target surface.

"Header set-up to avoid over threshing is also an important part of improving harvestability and grain quality," said Mr Cumming.

To help protect Australia's international trade it is important that producers only use registered products and do not exceed the maximum label rate.

*Further information:*

**Gordon Cumming, 0408 923 474,  
pulse.gordon@bigpond.com**

**GRDC code: PAL00016**

## New herbicide trial results on NVT website

The latest results of herbicide testing on newer varieties is now available on the Grains Research and Development Corporation (GRDC) funded National Variety Trials (NVT) website. The information includes details of varietal sensitivity to herbicides.

*Further information:*

**www.nvtonline.com.au**

## New fact sheet and web site on End Point Royalties (EPR)

A new Grains Research and Development Corporation (GRDC) End Point Royalties Fact Sheet is available on line to help explain the intricacies of end point royalties. It is available at [www.grdc.com.au/GRDC-FS-EndPointRoyalty](http://www.grdc.com.au/GRDC-FS-EndPointRoyalty). Growers should have already received a copy in the last edition of Ground Cover.

The fact sheet covers the two collection systems in place for collecting EPR's and directs growers to the new website [www.varietycentral.com.au](http://www.varietycentral.com.au) for information on EPR rates for different varieties, who owns Plant Breeders Rights (PBR) and the royalty manager for each variety.

**GRDC code: SED00001**

## New mouse control fact sheet

Mouse numbers can build rapidly in the right conditions, leading to crop damage throughout the growing season. Monitoring and early detection of an increasing mouse population is essential if effective control is to be implemented. A new fact sheet on mouse management is available at GRDC <http://www.grdc.com.au/GRDC-FS-MouseControl>

## New northern region yellow spot fact sheet

A break from wheat-on-wheat, stubble management and growing resistant varieties are important risk-reducing practices for the stubble-borne disease yellow leaf spot. A new fact sheet on yellow leaf spot and management to reduce the risk of infection is available at <http://www.grdc.com.au/GRDC-FS-YellowSpotNorth>

**GRDC codes: DAW00206; DAW00210; DAS00099**

## Call for Tenders GRDC Investment Plan 2012-13 (Open and Multi-stage Tenders)

**The GRDC Investment Plan 2012-13 (Open and Multi-stage Tenders) is now available on the**

**GRDC website – go to** <http://www.grdc.com.au/investmentplan>

The purpose of the GRDC Investment Plan 2012-13 is to inform GRDC's potential research partners about the Corporation's new investment priorities for 2012-13 which are subject to Open and/or Multi-stage tendering procurement methods. The plan does not include all other investment priorities for 2012-13 which are subject to direct negotiations, limited tenders and also consist of continuing investments.

Applicants are encouraged to carefully read the requirements listed within the Investment Plan 2012-13, specifically the Guidelines for Applicants, which provides a clear basis for developing a response to investment priorities published and identifies factors that may be important in any further negotiations.

Please note: There may be additional Open and Multi-stage Tenders advertised by the Corporation throughout the year therefore it is advised that research partners check the GRDC website on a regular basis.

### **Closing Date**

The closing date for all responses to tenders listed in the GRDC Investment Plan 2012-13 (Open and Multi-stage Tenders) need to be received by **2 PM AEST, Thursday 20 October 2011.**

Please refer to the '**Lodgement of Responses**' section within the Guidelines for Applicants for further information.

### **Questions and Answers**

The GRDC welcomes questions from potential applicants on any of the specific research priorities listed. These should be submitted in writing (email preferred) to the contact details listed in the priority specifications. The GRDC will endeavor to publish the questions with answers on the GRDC website within three working days.

The GRDC will not disclose the source of the questions. Questions will be accepted no later than one week prior to the closing date.

### **Contact Information**

The main phone contact for the GRDC is 02 6166 4500.

## **Diary dates**

### **Crop insect ID workshops**

The 'Sweep Net' will be running a free Insect Identification Workshop in Gunnedah on October 12 for agronomists (interested growers are also welcome). The workshop will run from 1:30pm until 5pm at the Gunnedah Services and Bowling Club, 313 Conadilly St, Gunnedah and will cover insect biology and collection techniques for insects of field crops. Workshops are also planned for the Moree/Warialda and the Coonabarabran areas (dates TBA).

*Further information:*

**Rachel Waugh 02 6773 2338**  
**[insect.ID@une.edu.au](mailto:insect.ID@une.edu.au)**

**GRDC code: UNE00013**

### **Update date 2012 – Northern Region**

#### **February/March 2011**

- Dubbo: RSL, March 1, 2012
- Goondiwindi Adviser Update: Community Centre, March 6-7, 2012
- 4 Grower Updates will also be run around this time, dates and times TBC

*Further information:*

**John Cameron or Erica McKay: 02 9482 4930,**  
**[northernupdates@icanrural.com.au](mailto:northernupdates@icanrural.com.au)**

**GRDC code: ICN000011**

<sup>Ⓛ</sup> Varieties displaying this symbol beside them are protected under the Plant Breeders Rights Act 1994.

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#### **Editor :**

John Cameron  
Ph: (02) 9482 4930,  
PO Box 718, HORNSBY NSW 1630

#### **Research writer:**

Erica McKay: (02) 9482 4930

#### **Layout and design:**

Lightning Designs Ph: (08) 8274 1648

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