Cotton Catchment Communities CRC
NSW DEPARTMENT OF PRIMARY INDUSTRIES

COTTON *TALES*

Macquarie Valley and Bourke

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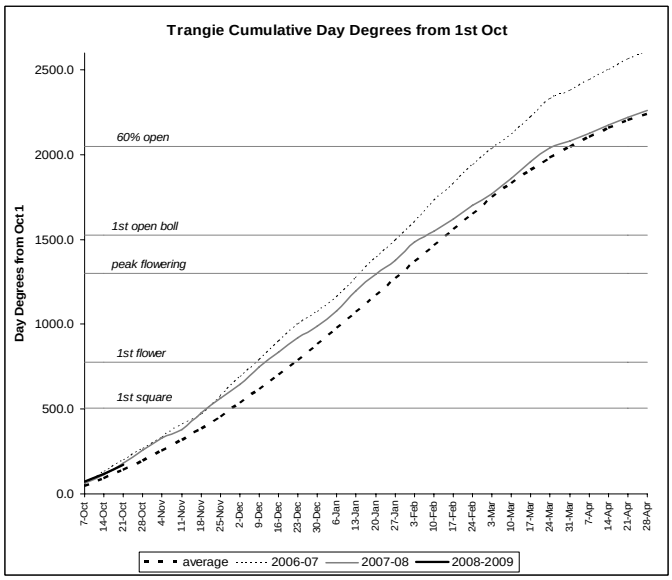
2008/09
No.6
24/10/08



Period	Cold Shock Days (TARC)
15 – 30th Sep 08	12
1st – 24th Oct 08	13

Valley average number of cold shock days for the entire growing season is 42 (Narromine/Trangie) and 35 (Warren).

Glyphosate Resistant Weeds

The Australian Weed Management CRC and national Glyphosate Sustainability Working Group have confirmed a glyphosate resistant population of liverseed grass (*Urochloa panicoides*) in northern NSW.

The announcement comes only a year after glyphosate resistance was confirmed in northern NSW in two populations of awnless barnyard grass, and twelve years after the first case of glyphosate resistance was recorded in a population of annual ryegrass in Victoria.

Several populations of liverseed grass in southern Queensland and one population of barnyard grass in northern NSW have also been confirmed as resistant to atrazine (Group C herbicide). Barnyard grass is one of most common summer grass weeds of cropping in the Macquarie region. Weed scientists have found that when uncontrolled, barnyard and liverseed grass populations can reduce sorghum yields by 25-40%.

With cases of resistance to other key agricultural herbicides also on the rise in Australia, farmers need to decrease their reliance on herbicides and adopt an Integrated Weed Management system to manage herbicide resistance and species shift.

The main principle behind IWM is to manage weeds by integrating different management techniques together such that each technique compliments the other. In short, it is the principle of **not** relying on one method of weed control alone, particularly herbicides.

There are three steps involved in implementing an IWM system:

1. Education. Understanding the principles of IWM, the range of control options available, and how to use them in an appropriate combination.
2. Evaluation. Know the weed spectrum in each field and develop economic and sustainable management strategies targeted at the biology of the weeds in question.
3. Implementation. ***Don't just think about it, do it!***

Preventing seed set and vegetative propagation is the only effective long-term method of reducing weed populations. To develop an IWM program you need to think strategically about how you can best utilise both herbicide and non herbicide control methods in combination to reduce seed/tuber production.

An IWM program may be conceptualised as shown in the figure below.

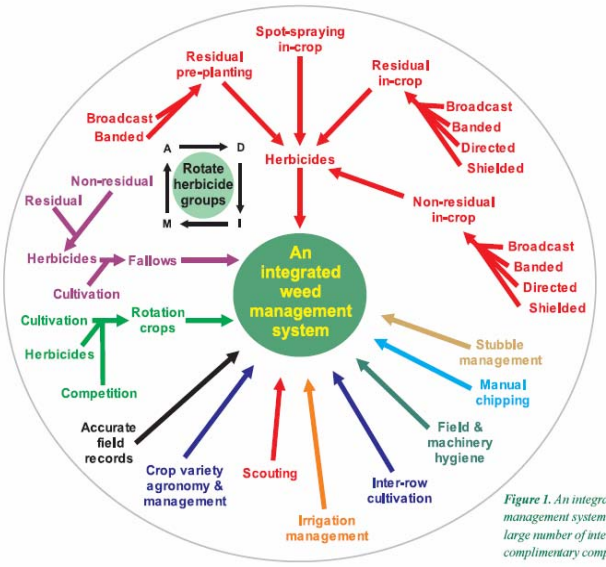


Figure 1. An integrated weed management system uses a large number of interrelated, complimentary components.

Using an IWM program throughout the entire cotton rotation, including rotation crops and fallows, will:

- reduce the reliance on herbicides,
- reduce the risk of herbicide resistance developing in the weed spectrum and prolong the usefulness of the available herbicides,
- reduce the rate of shift in the weed spectrum towards more herbicide tolerant weeds,
- reduce the risk of herbicides accumulating in the soil and riverine systems, and
- reduce the total weed control costs in the future by reducing the weed seed bank.

An IWM system may have added short-term costs, however research and farmer experience have shown that failure to adopt IWM leads to herbicide resistance. More information about developing an Integrated Weed Management system can be found in WEEDpak or on the Cotton CRC website www.cottoncrc.org.au

Article compiled by Lauryn Hanna, NSW DPI, Cotton CRC National Crop Protection Team. Acknowledgements to Andrew Storrie, Technical Weeds Specialist NSW DPI and WEEDpak for information in this article.