

HAVING travelled across the country over the past month listening in on scores of excellent Grains Research & Development Corporation Update presentations, it's impossible not to be impressed by the quality and relevance of the leading edge research work being done. Via the Updates, hundreds of world class Australian grain industry researchers have the chance to 'show us what they've got' and within strict time limits. It's a great way to have researchers cleverly zero-in on the main points – a very worthwhile exercise for both listeners and researchers. But these summaries do little to mask the very large reality that agriculture today, and particularly grain and fibre production, are highly complex businesses relying on constant productivity gains to stay profitable.



Undertaking high quality and targeted research – and to have the subsequent results 'consumed' and profitably adopted by farmers – is critical in helping farmers stay in the game. This means research funding organisations, like the GRDC, have an equally critical role in identifying what research is needed and when, and then funding accordingly. By and large, the system works pretty well, but it takes money – and a lot of it.

In the five years to June 30, 2018, annual grain levy contributions by growers and Australian government 'matching' contributions to the GRDC have averaged around \$120m and \$70m respectively. In turn, GRDC funding of grains industry R&D has averaged \$188m per year.

This legislated contribution and R&D funding model, is the envy of researchers and research institutions around the world.

As a result of the drought in the grain producing regions of the eastern states, total national winter and summer crop deliveries for the 2018–19 season are estimated at around 33 million tonnes – or about 30 per cent less than our 5-year average. Consequently, GRDC levy income and Australian government contributions for 2018–19 will also fall.

Depending on the final national crop value, the levies collected from the 23,000 grain businesses across Australia will drop to somewhere around \$100m, propped up to some extent by the higher, drought-induced, domestic grain prices. And a very big thank-you is in order here to Western Australian growers who will be contributing more than half of the national levy total. Australian government contributions will also fall by a corresponding amount but the end wash-up will be revenue of somewhere around \$150m for the GRDC in 2018–19.

The point is the nationwide R&D levy collection and expenditure model works pretty well for a country where grain production happens across a vast geographic area – and wildly fluctuating yields are par for the course.

Here's hoping the weeks ahead bring some much needed rain to a very dry landscape. This issue contains many articles based on some excellent GRDC Updates presentations, to help you make every post a winner in the coming winter crop.

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In this issue...

New genetics to improve wheat establishment with deep sowing

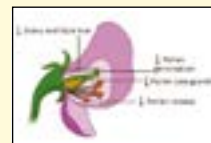
In dryland cropping regions, winter crops are typically sown on the first breaking rains. Sometimes these rains are insufficient – and the sub-soil moisture accumulated is too deep – for successful sowing with conventional varieties and planting systems.



See article Page 8

The physiology and genetics of cold temperatures in chickpeas

During flowering, chickpeas are sensitive to cold (<15°C) temperatures which cause flower abortion and results in a delay between flowering and pod onset. This can cause yields to fall between 1.7–2.7 tonnes per hectare below potential yield.



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Three of the best!

"In your opinion, what is the best tractor ever made?" The question was directed to me by a young bespectacled intelligent looking chap, to whom I had been introduced, at a recent field day.



See article Page 19

Cover crops are unearthing the secrets to improved soil health

Multi-species cover cropping is the most effective way to improve soil health, and has the potential to reverse damage caused by years of conventional, full tillage farming practices and boost the sustainability of broadacre dryland cropping in Australia.



See article Page 29

Fighting fungicide resistance in a key barley disease

There are management strategies to help grain growers minimise the development of fungicide resistance in spot form of net blotch – one of Australia's most damaging barley diseases.



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