

Outline article.

Biotechnology – the next leap forward

Andrew Broad

The Australian grain industry must be innovative to remain globally competitive. The use of biotechnology will play a significant role if Australia is to continue to be a major player in the global grains market. But currently growers and the general public are hearing conflicting view points on whether this technology will benefit Australia, or whether we'd be better off without genetically modified crops.

In a quest to cut through the spin, and a belief that farmers generally speak the truth to other farmers, in 2006 I traveled to eight countries, including ten states in the USA. The Grain Research and Development Corporation sponsored me through a Nuffield Farming Scholarship.

Some of the questions I asked were as follows:

Have we been left behind in our canola industry compared to other countries?

Canada is the world's largest producer of genetically modified (GM) canola. Would they turn back the clock if they could?

Are Canadian GM canola growers making money, or just the developers of the technology?

If Australian producers get access to this technology, how do we best apply it?

If Australia grows GM canola, can we sell it?

Declining yields and profitability from Australian canola has become a significant issue. Certainly on our farm, the inclusion of canola within our wheat rotation has assisted greatly in increasing yields. However, the cost of growing canola, combined with late seasonal breaks has forced a reduction in our area seeded.

This is in contrast to the Canadian experience where the annual area seeded to canola has increased from five million hectares to six million hectares in 2007. Ninety five percent of Canadian canola is non conventional. Overwhelmingly Canadian growers are choosing to grow GM canola. In fact, leading farmers I talked to were very happy with the technology from both environmental (reduced chemical quantities and toxicity) and financial perspectives.

The GM technology does have a financial cost, but the greatest influence on canola yield is the length of growing season and moisture. Therefore, the reduced usage of herbicides plus yield benefit obtained from the ability to seed early and control weeds, more than covers the additional cost.

A grain farmer in Saskatchewan Canada told me: "The developers of Roundup Ready canola are a progressive company trying to make their own money, the spin off is they make a product that makes me money. If it didn't make me money I wouldn't buy it."

Before leaving Australia, I contacted the Network of Concerned Farmers, (an anti GM lobby group based in Australia). They were able to connect me with a few farmers in Canada who held concerns about GM technology. I interviewed some of these farmers in Canada who previously toured Australia warning about the dangers of GM canola. Although I respect their concerns, I can only conclude that if their farming systems were adopted within Australia, we would have a bankrupt rural economy, with restricted ability to both feed our population and export. I have had the privilege of seeing for myself, and I believe that both the Australian farmer and public are being poorly informed by well organized anti GM campaigners.

There is absolutely no point in growing a product that the customer doesn't want.

So, I looked to see if Australia was receiving a premium in price or additional market access though producing non-GM canola.

The price of canola was high in Australia this year due to the drought. On the world market, once currency and sea freight rates are taken into account, conventional and GM canola is the same price.

At peak production, one million hectares of canola was planted annually within Australia. Since 2002 total area seeded has reduced by 44% with no improvement in five-year average yields. In contrast, average canola yields in Canada have increased by 15.8%, with an increase in area seeded.

In the last ten years Canada has produced tonnages of GM canola equivalent to fifty years of Australian canola production. The argument that this is untested, new technology, no longer holds water. The huge tonnages that have been exported out of Canada, finding markets at the same price as non-GM canola, prove that there is broad commercial acceptance. Additionally, the substantial amount that has gone into the food chain, should put to rest some of the health concerns that are sometimes raised.

The market for oil-producing crops is expanding rapidly, and Australian farmers have been denied access to the best genetics in the world because of some State Government imposed moratoriums upon the commercial production of GM canola.

I stopped to take a photo in Germany of a farmer plowing his field, and discovered that his tractor was running on cold pressed canola oil. This

canola had been grown in Canada, exported to China for processing, the meal used as a high protein stock feed, and the oil then exported into Europe.

Rural Australia has been going through a tough time in the last few years, and we need leaders with vision.

The use of GM canola for the biofuels industry would create additional rotational benefits and markets for the grain industry.

The processing of the oilseed can be done in rural areas creating employment.

The meal from the cold pressed canola can provide a cheap high protein feed source for the dairy industry. Australia's dairy industry is currently importing and feeding GM soy meal out of South America.

And the oil can be used as a blend for low emission renewable diesel fuel.

The issue of technology in agriculture is critical to the future of rural Australia. We ignore it at our own peril. We must farm in the real world, not the ideal world. This is technology that will produce clear environmental benefits and put money into the hands of farmers, rural communities and the people of Australia.

Written by Andrew Broad
1684 Yorkshire Road
R.M.B. 195
Bridgewater on Loddon, Victoria 3516
Ph: 03 54373136 or 0428 373136
andyrach@activ8.net.au