Agribusiness - Industry Commentary, Debate, Analysis and Research

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Volume 114 Friday, 23 May 2003

Back on the GMO Merry-Go-Round and other stories.

After a brief respite, not dissimilar to the breaks in hostilities agreed to between the Allies and Germans on the Western Front in WW1, GMO trench warfare has broken out again in earnest.

In Australia the latest manoeuvre in this battle of attrition is from the NSW Government as it jumps onto the GMO moratorium bandwagon.

Placing a moratorium on the commercial production of GM crops makes good political sense. It removes heat from the issue by taking it off the 'front page' and out of the news bulletins. It delays the need for a 'definitive' decision to a time when (hopefully from a political point of view) the issue will be less controversial and the prospects for electoral damage are lessened.

The decision by most state governments in Australia to temporarily 'ban' GM crops sends a bad message to the investment community about the agribusiness sector. It signals that government intervention in the sector is still too high. We all want a more productive, efficient and profitable agri-food-fibre sector, attracting investment is the key to the sector expanding.

Adoption of new technologies is essential if we are to keep up with our global competitors, particularly the rapidly expanding players in South America, where spectacular growth in the agribusiness sector (particularly grain) has been driven by foreign investment. Can we afford to make ourselves less interesting to investors?

Bans and Challenges

It is patently obvious that the decision to erect barriers against GMO's by the EU was driven by domestic politics, not by science. But then the trade distorting policies of the US, in particular their farm subsidies and commodity dumping are driven by the same domestic political forces at work in the EU – the common desire of all politicians for re-election.

In the recently announced legal challenge to the EU bans, the US and its backers (including Australia) are playing their new variation of the 'third world hunger' card; that bans on GM imports into the EU are limiting the options for third world countries to benefit from the magic of transgenic crops, as they fear being locked out of EU markets if they start growing them.

If the EU continues with its GMO ban it will have an impact on the uptake of transgenic technology in less developed countries (LDC's), no question about that. But it has to be pointed out that the main losers from the bans to date are not the farmers and consumers in the LDC's, it's the technology companies (their stock holders) and US farmers.

It is interesting to reflect on Australia's' support for the US challenge to the EU bans in light of the moves by state governments here doing an 'EU' on GM crops. If the legal challenge to the EU bans succeeds, will this then mean the state bans in Australia can be overturned in a similar way? What impact will the Australia – USA FTA have on the state bans? Will we see the US take legal action against Australia?

Now that IS an interesting prospect…

No High Ground Here

In this particular trade dispute no party has any justifiable claim to the moral high ground. Both the US and the EU are guilty of double standards and putting domestic political interests ahead of international responsibility.

The EU ban on GM foods cannot be supported on scientific or environmental grounds and should be removed and the US is guilty of trade policy double dealing and cynically using subsidies and dumping to advance the interests of the US agribusiness sector.

Simply being *able* to grow GM crops won't magically resuscitate the agribusiness sectors in less developed countries. This is a simplistic 'silver bullet' solution to a complex problem. Agribusiness sectors in LDC's have been starved of investment and adversely effected by subsidies in developed countries. If the US (and others) are *really* interested in helping LDC's they will have to stop dumping food as an initial rebuilding step.

For the EU (and for all countries for that matter) perhaps the best way to address the GM food dilemma is to let consumers sort it out for themselves. Label all foods so consumers can make a choice and when they do, the food supply chain – all the way from the retailer via the food processors to the producers - will very quickly fall into line behind the choices they make.

Let's give the market an opportunity do its stuff.

Living up to expectations…finally.

There is increasing evidence that GM crops are starting to meet some of the promotional hype put forward over the last decade. Evidence collected in the US indicates that transgenic crops are profitable for farmers and they are helping to reduce chemical loads, this is supported by Australian experience with Bt cotton.

The paper titled The Payoffs to Transgenic Field Crops: An Assessment of the Evidence [1] reviewed in Agribusiness Vol 108 (21 March 2003) provides compelling evidence that the technology is starting to work.

Much has been said about the positive benefits of GM crops to the third world. In fact, the 'feed the world's hungry' line has been one of the core planks on which the technology has been promoted.

Critics of the 'feed the world's hungry' pitch (and this correspondent is among them) point out that the real causes of hunger are not the amount of food that is produced – more than enough food is produced globally today to supply the nutritional needs of the world's population.

The real cause of hunger is a combination of logistics (the food is where the people aren't and its difficult to get it to them), conflict (diverting funds and destroying infrastructure), politics (recent experience in Africa where governments prevented food from being distributed), financial (no money to buy food) and the trade distorting policies of large exporters (mainly the US and the EU countries).

By saying that transgenic crops can increase productivity and therefore reduce hunger, without addressing the real causes mentioned above, is at best naive and at worst misleading or seeking to be emotionally manipulative. There are plenty of people going hungry in India, yet this country has recently become a wheat exporter. There are people without enough to eat in the US, the largest food exporter in the world, so directly linking productivity to starvation flies in the face of facts.

However this is not the end of the story. Evidence is emerging that transgenic crops can play a big role in improving the living standards of farmers in less developed countries.

The University of Bonn, in conjunction with UC Berkeley, have been conducting trials on GM varieties of cotton in India and the results of their trials are dramatic. Yield improvements of up to 80% have been recorded in India (and a reduction of 70% in the application of chemicals noted in China - see page 3 for the full release).

Back to Trade

Now this is where the whole trade and technology issue starts to get really muddy and complex, with myriad knock-on effects and ample opportunities for musing about winners and losers.

People can't eat cotton (not event chocolate coated Indian cotton for those who remember Catch-22) but it is a 'cash crop', production and export *can* earn valuable foreign exchange for LDC's that *can* be used to purchase food or finance the establishment / rebuilding of a their domestic agribusiness sector.

This is where the trade policies of (particularly) the US and EU start to have their impact on the viability of agribusiness in less developed countries.

By subsidising overproduction in their food production sectors and dumping the excess on world markets (or in the case of the US, using food aid as a coercive political and economic tool) western countries (especially the US and EU) are retarding or eliminating altogether the development of viable agribusiness sectors in LDC's, particularly those who are purchasing dumped commodities or in receipt of food aid.

The biggest advance for the world's starving and undernourished will not be the production of transgenic crops, or the removal of the EU ban on GM foods, it will be the removal of farm subsidies in the US and EU and the immediate cessation of their dumping policies.

Do Western farmers really want a transgenic world?

The impact of 'greater global productivity' brought about by widespread adoption of transgenic crops brings rise to some interesting scenarios that may not really be in the interests of farmers in developed countries.

The example of GM cotton is a simple one (well almost). Increasing cotton yields would be good for Indian farmers, boosting productivity and their incomes dramatically. It would be good for their communities – more economic activity leads to wealth generation and the establishment of a more viable and sophisticated support sector. Reducing chemicals applications will be good for the people and the environment.

And this may be against the interests of US, Australian and other cotton farmers.

If their peers in India grow GM varieties and if yields there are boosted dramatically, the first impact will be a drop in world cotton prices. The subsequent fallout would be bad for the Australian cotton industry and very bad for the communities and support industries that have grown up around cotton production.

But then a reduction in size (or the competitive demise?) of the cotton sector may have positive environmental outcomes in Australia as demand for irrigation water would, at least initially, reduce. While the outcome would be economically bad, an Australian environmentalist would no doubt see things differently.

An obvious outcome from a fall in global commodity prices caused by increase global food production will be further erosion of the terms of trade of farmers in developed countries. In the US and the EU – probably all developed countries - the clamour would be for more farm support, so supporting the expansion of transgenic crops world-wide may not be in the interests of the farmers in developed countries (including Australia) and they *may* be better off trying to capture the competitive advantages for themselves.

[1] Marra, M., Pardey, P., and Alston, J. (2003). The payoffs to transgenic field crops: an assessment of the evidence. *AgBioForum, 5*(2), 43-50. Available on the World Wide Web: http://www.agbioforum.org

Genetically Modified Cotton: Much Higher Yields - Study shows: farmers in tropics could benefit

Genetically modified (GM) pest-resistant cotton may provide yields up to 80 per cent higher than traditional types. This has been observed by scientists from the University of Bonn and the University of California at Berkeley in field trials in India. Their conclusion: peasants in the tropics and sub-tropics can benefit substantially from GM plants. These findings are surprising, since it has hitherto only been possible to detect very minor increases in yield, if any, in similar studies in temperate climate zones such as the US and China. The researchers published their results in the 7th February issue of the prestigious journal Science (Vol. 299, No. 5608).

The enemy is small, but greedy: the bollworm destroys a large part of the world's cotton crop every year; farmers spray insecticide up to 20 times a year to combat this most important cotton pest. In 1997, therefore, Monsanto launched a type of cotton on the market which is largely resistant to this pest: Monsanto scientists had introduced a bacterial gene into the plant which contains the blueprint for a very specific insect poison. What is known as Bt cotton (Bt stands for the gene donor Bacillus thuringiensis) produces its insecticide itself, so to speak.

On more than one third of China's total cotton-growing area this GM type is being grown; the use of pesticides has been reduced by over 70 per cent. Pesticide pollution, which used to be the norm, has been greatly reduced. However, the yield only increased by a maximum of 10 per cent; in GM soya beans scientists have sometimes even noticed slight reductions in yield. However, the 'pressure from pests' in the US or China, where the studies have been taking place up to now, is considerably less than in the tropics and sub-tropics. Also, chemical pesticides are less affordable to farmers in those poorer countries. For example: whereas in the US insects only destroy about 12 per cent of cotton production annually, the losses in India's small farm sector amount to 50 to 60 per cent.

Dr. Matin Qaim of the University of Bonn's Centre for Development Research (Zentrum für Entwicklungsforschung, the ZEF) has therefore been investigating the success of Bt cotton in India together with Professor David Zilberman from Berkeley. In 2001, a successful field trial was started, involving 395 farms from seven Indian states. In three adjacent fields the farmers were to plant Bt cotton, the same sort without the resistant gene and a third type which is a popular local hybrid.

The use of insecticide for the Bt cotton was on average 70 per cent less than for the two other types; however, the yield was more than 80 per cent higher. 'Despite the higher costs for the seeds, the farmers were able to increase their income five-fold with the GM type. Admittedly, infestation with bollworm was particularly high in 2001,' Dr. Qaim cautions. 'In preliminary studies with fewer farmers between 1998 and 2001 we were able to detect an average increase in yield of 60 per cent.'

The Bt cotton findings are basically also applicable to food plants. Particularly regions in the tropics and sub-tropics, which are under severe pressure from pests could benefit from GM plants with increased pest resistance, the scientists conclude. 'We expect the biggest increases in yields to take place in South and South-East Asia and in Central and Southern Africa, i.e. precisely in those areas with the highest population growth, which are especially dependent on increasing yields.'

Even so, Qaim argues in favour of taking the potential risks of 'green genetic technology' seriously. 'In all the previous studies Bt cotton has been proved to be harmless to humans and the environment; however, we should test each new application on its individual merits.'

He recommends that the production of GM seeds should not simply be left to the big companies, since the dependence of developing countries on the developed nations would then increase further. However, in his view this problem cannot be laid at the feet of gene technology: 'It is in our hands to create the general conditions which enable this promising technology to be made available to the poor at affordable prices.'

http://www.uni-bonn.de/en/News/18_2003.html

Australia joins action against EU moratorium on GM

The Federal Trade Minister has defended his decision to join a US action against the European Union's moratorium on GMO products. Mark Vaile says Australia needs to have a say in the action, despite most states here placing a moratorium on GM crops. He says the Government needs to be involved in case things change in the future, as they did in previous world trade talks. "There are decisions taken in the Uruguay round that were thought of at the time to not have any impact on Australia – that now do. And so we do need to take an interest in this – there are concerns in terms of the safety of the use of GMO product – but over time, those concerns may be allayed. So we can't say at the moment, that we shouldn't be involved in new rules if that's what's taking place."

It is understood that if the US and Australia win at the WTO, they could impose retaliatory trade sanctions on other EU exports to force the EU to change its laws. EU Trade Commissioner said the move by the US was “legally unwarranted, unfounded and politically unhelpful.” He said the EU's new regulatory framework for GM crops, in place since last October, was clear, transparent and non-discriminatory and thus in line with WTO rules. He said the EU rules had allowed two new cottonseed oils to come to market and a number of new applications could be approved in the next few months. (Australian Financial Review 15/05/2003)