

BERL Report Underscores Economic Risk of GM Release

The scale of damage to the economy that could result from a decision to release GMOs was made clear by a BERL study Government released the day before Easter.

The overall picture is one of demonstrable costs versus highly speculative benefits. It is a clear warning sign to a nation contemplating GM agriculture.

While BERL states that the overall outcome for the economy from releasing GMOs could be positive or negative, the positive results depend on a series of heroic assumptions.

Literally all the positive assumptions are hypothetical and many are strongly weighted in favour of GM production.

The negative influences however are verifiable today and recorded by the study. They are the impact on New Zealand's clean green image and the strong and widening market rejection of all GM food products.

Despite Government claims, the study does not show support for Government's plans to soon pave the way for releasing GMOs. It instead raises all the more the question, why release now when so many risks are apparent and unresolved?

This question is completely distinct from work on GM research and GM medical applications which are lab-based and do not generally trigger consumer resistance while still offering the prospect of significant gains for the nation.

The BERL-led report is actually a compilation of three separate strands of work: a market research survey and two different sets of economic modelling.

The market research sets the scene:

- “Between 20% to 30% [of consumers in major export markets] state they would cease purchasing New Zealand commodities if New Zealand released GMOs”. “There was no price at which they would purchase” the report further stated.
- 47% would be “more inclined” to purchase New Zealand products if no GMOs were released in New Zealand compared to just 2% that would be “less inclined” to purchase.

These results were then fed into a Lincoln University trade model which projected:

- A 20% drop in sales of dairy, meat and horticulture industries would result in producer incomes falling 43%.
- However, should output in these industries rise due to GM by a similar percentage, this would result in just a 5% income gain.

In other words, should GM prove capable of delivering major productivity gains, the benefits from this would largely be offset by falling prices. So the best case for GM agriculture is a 5% gain versus a loss nearly ten times this if significant sales are lost.

In consequence, the report observed that pursuing additional sales was a better strategy than seeking productivity gains through GM release.

However, the study also featured a BERL model of the New Zealand economy and this gave a more muted message as to the poor economic prospects for GM release. Government referred only to results from this model when releasing the report.

Environment Minister Marian Hobbs claimed: "The research shows that the most likely economic impact from the careful and considered release of GMOs would be a small increase in GDP over 10 years, compared to a small decrease from forgoing GMO releases."

Actually, the report does not show or say this. The BERL modeling presents a number of scenarios but argues that the uncertainties surrounding the assumptions are too great to allow meaningful predictions.

The report states that the effect on GDP is "not very great under any scenario" and ranges from "3% higher GDP to 3% lower GDP" after 10 years. In other words, after a decade of investment, at best there is a small gain over the base case.

The worst case however is far understated by the report's use of a series of heroic assumptions in favour of GM release.

Consider the following:

- The three GM applications chosen for study are entirely hypothetical. They are simply development prospects and may never be commercialised. Each of GM grass for animal feed, a GM mechanism for possum control, and another for protein production still face serious challenges before they are proven.
- "It would be wrong to imply that there are now available substantially-developed GM technologies which could be applied in pastoral agriculture should New Zealand decide to adopt GM technology" the report states with respect to the GM grass. Thus productivity gains as high as the 2.5% per annum assumed are a matter of speculation. This level is very high in comparison to past GM crop performance.
- It is however assumed that the GM technology that makes any such gains possible will be available only to New Zealand for between 5 years and 10 years. That is, the technology would need to be invented in New Zealand, not licensed to other nations during that period, and most importantly, no other nation would make similar improvements by a parallel mechanism.

Perhaps the biggest advantage for GM production built into the model is the way adverse consumer reaction is simulated. The 20% to 30% fall in demand the surveys recorded may well be an underestimate of the effect.

As the report notes, wholesale purchasers and major retail chains are the centres of power in the food market and perform a gatekeeper role. Their assessment of customer tolerances dictates what actually makes it to the tables. If 20% to 30% of their ultimate customers even indicate that they are GM intolerant, that would likely be enough to deter them from purchasing any level of GM linked product.

The real worst case scenario is that the gatekeeper effect sees not only all GM production shut out of New Zealand's traditional markets, but also non-GM products of the same variety. This is precisely what happened to US corn exports to Europe. They have all but ceased when only a minority were GM.

New Zealand has much more at stake than other nations in considering GM food production. Half the nation's export income is derived from primary production. This is five times the OECD average of 10%.

There is no apparent demand for existing GM varieties by New Zealand farmers. New GM products of significance are five to ten years away from commercialisation.

So why open the gates to GM release now? Why not wait and see what emerges from the pipeline in five years time?

At least until the minimum economic conditions for GM release are satisfied, there is every reason for New Zealand to retain its status as a GM free food producer.

Changes in Producer Incomes from Changes in Productivity and Demand

Demand Fall	Productivity Increase			
	None	25% increase	40% increase	60% increase
None	0.8%	5.1%	8.1%	10.5%
20% discount for all New Zealand meat, dairy, and fruit	-43.3%	--	--	--

The above represents scenario studies of productivity gains from introducing a GM grass to 50% of New Zealand's pastures.
