



AN INCONVENIENT TRUTH

Genetically modified food is not the evil agent green groups made it out to be

SUE NEALES
RURAL REPORTER



LAST year, Microsoft billionaire Bill Gates gave \$US10 million to British scientists to crack a problem he hoped might help solve the looming world food crisis.

Unusually, this time the philanthropy of the Bill and Melinda Gates Foundation was met with howls of outrage from left-leaning politicians and environmental groups that previously had welcomed its efforts to eradicate malaria and alleviate global poverty and hunger.

The reason? The Gates Foundation had dared to suggest that if British scientists could transfer the genes that give some root bacteria the ability to produce nitrogen from soil and air into wheat, corn or rice plants, it might help feed the nine billion people who will inhabit the planet by 2050.

Success would potentially allow wheat, rice, corn and other global food staples to be grown in even the poorest soils of Africa, Asia and South America without the need for costly fertilisers, greatly expanding world food production.

But so divisive has the global debate about the merits and safety of using genetically modified crop varieties become that the Gates Foundation's move was met with controversy and derision.

Greenpeace Australia's sustainable agriculture adviser Richard Widows immediately called the donation misplaced. He accused the Gates Foundation of feeding not the world but the profits of its biggest biotech and chemical conglomerates.

Greenpeace also pointed out that in 2010 Bill Gates purchased 500,000 shares in multinational Monsanto — one of the world's biggest developers and owners of genetically engineered crop patents and seed licences — and that the investment is now worth \$US23m (\$21.8m).

"If Mr Gates is serious about feeding the world's poor and helping us establish sustainable farming practices that will heal the environment and provide a future for humanity, he needs to look less towards GM crops and more towards nature," Widows wrote on the Truefood Network website.

"GM technology isn't about feeding the world or improving farmers' lives; it provides biotech and seed companies with the opportunity to own patents over crops and nature. It is about control of the global food system, and anyone who tells you different is lying."

The most strident anti-GM organisations — led by Greenpeace and Friends of the Earth — have also long claimed that food produced from GM crops is toxic, unsafe for humans to eat or potentially harmful to human health.

"It's the precautionary principle: that where the results of a new technology are still unknown, or where there is a lack of scientific knowledge or consensus regarding its safety, it's smarter not to use it," Greenpeace exhorts.

It was this attitude towards GM



Clockwise from above, Rodney Weidemann grows GM canola at Rupanup in Victoria; Steve Marsh on his Kojonup organic farm in WA; Greenpeace activists destroying a GM wheat experiment

crops that prompted two Greenpeace activists in July 2011 to climb over a fence at CSIRO's plant research centre in Canberra and whipper-snip an entire trial plot of pioneering new wheat varieties bred using genetic engineering techniques.

The destroyed wheat plants had been genetically enhanced using a naturally occurring barley gene to modify starch and fibre levels and enhance nutritional value and human bowel health.

By accident, some genetic changes had also produced a wheat variety that has since taken the agricultural world by storm, promising growth and grain production 30 per cent higher than normal yields.

The destruction set the key research project back by a year, according to the CSIRO Plant Industry chief Jeremy Burdon — a delay the program could ill afford, given the urgency of boosting food security.

Greenpeace has since paid \$280,000 in reparation to CSIRO for the damage it caused.

But while such anti-GM rhetoric was commonplace in the 1990s when the use of novel gene technology by the scientific community exploded, there are signs its ferocity is waning. Early this month, a British environmentalist, Mark Lynas, one of the first leaders of the anti-GM movement in the mid-90s, regretfully admitted to a farming conference in England that he had been wrong.

Lynas, a leading author on climate change issues, said he had slowly realised it was inconsistent with his reliance on evidence-based science and scientific knowledge to argue that climate change is a reality while simultaneously leading an inherently "anti-science" movement that demonised genetic modification of crops.

"When I first heard about Monsanto's GM soybeans I knew exactly what I thought: here's an American corporation with a nasty track record, putting something new and experimental in our food



without telling us," Lynas said in his mea culpa. "Mixing genes between species seemed to be as about as unnatural as you could get; something was bound to go horribly wrong; it was the stuff of nightmares."

Lynas acknowledged that the campaign he had helped coordinate and wage in the 90s had been remarkably successful. The images of mad scientists in laboratories secretly tinkering with the building blocks of life to create "Frankenstein food" were picked up by Greenpeace, Friends of the Earth and other environmental groups. Growing GM crops was banned in many parts of Europe, India, Asia and Africa. In Australia, the first GM cotton was planted commercially in NSW in 1996. China, meanwhile, is the world's largest grower of GM cotton.

Despite the nightmarish images, there remains no evidence the biotechnology is evil, environmentally damaging, dangerous to human health or beneficial only to multinational corporations.

Instead, Lynas told the conference this month that GM crops such as cotton, corn, soybeans and canola growing in the Americas and Australia had resulted in less pesticide and chemical use, reduced the costs of inputs to farmers, cut water usage and boosted food production.

And with three trillion meals containing food derived from GM-bred plants in 29 countries eaten in the past 15 years without one substantiated case of harm, Lynas is now certain it is safe.

"One by one my cherished beliefs about GM turned out to be little more than green urban

myths," Lynas admitted. "The GM debate is over. Finished. On GM there is a rock-solid scientific consensus, backed by the Royal Society, health institutes and national science academies around the world; yet this inconvenient truth is ignored because it conflicts with (green) ideology."

The same call for more science in the GM debate was recently made by European Commission chief scientist Anne Glover, frustrated at seven EC countries that continue to ban the technology.

"There is no substantial case of any adverse impact on human health, animal health or environmental health, so that's pretty robust evidence," Glover said, claiming it was time to move on from the generation-ago debate.

"I am confident in saying there is no more risk in eating GM food

than conventionally farmed food."

Rodney Weidemann is a Victorian farmer who has been growing GM canola for the past four years on his Rupanup farm near Horsham in the Wimmera.

The canola has been specially bred to contain a new gene that makes it resistant to being killed by Roundup weed-killer — allowing him to spray weeds as they appear within his crop, without harming the canola.

He pays a licence fee to a seed company for the right to sow the trademarked GM canola, and pays more for the seed. But he believes the benefits of his GM crop over traditional varieties more than outweigh the extra costs, reducing the need for ploughing, retaining soil moisture, and boosting yields by 25 per cent.

"All this row about GM crops

seems to be a bit of a storm in a teacup. As farmers today we have to use all the technologies we have available to us," Weidemann tells *The Australian*.

"If the next GM developments will control some of the severe elements in farming with new crops that are drought and frost-tolerant, it's really exciting; it would push farming forward a lot."

But not all Australian farmers are as happy with the spread of GM crops. While GM cotton and canola crops are grown commercially in Victoria, NSW, Queensland and Western Australia, their use is banned in South Australia and Tasmania.

The federal government last year asked both states to revisit their GM positions by the end of 2014, after its new National Food Plan looked to biotechnology advances in agriculture to boost productivity, urging greater acceptance and planting of GM crops.

But the SA government determinedly told Canberra in December that its GM ban would not be lifted, nor reconsidered until 2019.

"Our non-GM crops attract greater market prices and the exceptional quality of SA's food bowl is synonymous with the state," state Agriculture Minister Gail Gago said. "We will not be doing anything to jeopardise that."

In WA, a test case that will bring the issue of contamination caused by GM crops into the spotlight is scheduled to be heard early this year in the Supreme Court.

Organic lamb, wheat and oats farmer Steve Marsh lost organic certification for his 500ha Kojonup property when GM canola that he alleges blew over on to his place from the GM canola crop being grown by neighbour Michael Baxter was discovered.

Backed by the Safe Food Foundation and with lawyers Slater & Gordon acting pro bono, Marsh in his civil case is alleging loss of income and damages as a result of negligence.

"It's not just a case about non-GM versus GM, but about the

right of an organic farmer to retain his commercial advantage and not be adversely affected by another farmer's own commercial advantage, growing GM canola crop," lawyer Mark Walter says.

"It's about Steve exercising his civil rights to make his own decisions on his farm, about balancing competing interests of neighbouring farmers and about the laws dealing with this new technology to ensure this (unwanted contamination) doesn't happen again."

Federal Agriculture minister Joe Ludwig is convinced genetically enhanced varieties of crops such as cotton, sorghum, sugar and canola hold the key to vastly increased food production and our role as a food bowl for China.

"We are not about telling farmers what crops should be grown where or telling consumers what they can and can't eat, but GM food is an issue we need to have a national conversation about," he says.

Science & Technology Australia's president Michael Holland agrees with Ludwig, saying scientists have to accept some of the blame for community hysteria and fears.

But he hopes the pendulum is swinging back — a consequence, he believes, of greater community acceptance and understanding of the benefits of other complex gene biotechnologies, such as stem cell medical therapies.

"But on GM, we as scientists were appallingly bad at explaining the benefits of this new technology to the public because we thought it was so self-evident and obvious," Holland says.

"So scientists were caught totally by surprise 10 to 15 years ago when people were distrustful of this technology. The backlash was so unexpected that many scientists working in the field just went back to silently and discreetly doing their work, rather than putting their head up above the wall and talking about it, because they feared they would get shot."

Holland concedes the science of the issue in the public's mind has always been somewhat muddled by the close involvement of the big chemical companies — Monsanto, Bayer, BASF and Syngenta — buying nascent university and CSIRO-bred GM crops and research, which they then commercialise, patent and sell to farmers under costly grower licences.

For example, Bayer has recently entered into a deal with CSIRO to buy and co-develop its latest high-yielding GM wheat varieties, an expensive trial and regulatory process that may take another five years before the new and better wheat seeds are commercially released.

"The distrust is there of industry, more than of science, but when we get closer together it is sometimes hard to tell us apart," Holland says.

"But I think trust is coming back; people were told bad things were going to happen and they were going to die as a result of consuming GM foods. It hasn't happened, so the extreme anti-GM view has nowhere credible to go."

Lynas thinks it is time for a strong dose of "international myth-busting" on the GM question. "The plant scientists I know hold their heads in their hands when we talk about this issue because governments and so many people have got their sense of risk so utterly wrong, and are foreclosing a vitally necessary technology," he says.

"The risk today is not that anyone will be harmed by GM food, but that millions will be harmed by not having enough food (to eat) because a vocal minority of people in rich countries want meals to be what they consider natural."

GM: A SNAPSHOT

- Genetic modification changes the DNA within the genes of an organism in ways not possible through cross breeding
- The most contentious practice of GM involves the transfer of genes from one species to another. For example, in Australia a gene from a soil bacterium has been inserted into the genes of cotton to produce built-in insect protection, reducing pesticide use by more than 80 per cent
- The most famous example is golden rice, which was inserted with the genes in corn that produce vitamin A (a vitamin that if deficient in pregnancy causes blindness

in babies). The result is a rice with enhanced levels of vitamin A that will help combat blindness in millions of children in developing countries

- GM can also involve "breeding up": inserting DNA from an outstanding individual into the DNA of another of the same species

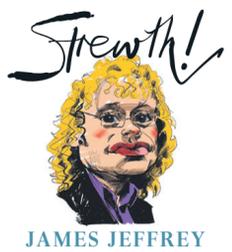
- Other forms of GM include switching genes on or off or silencing genes, such as in oilseed crops where it is being used to "turn down" production of unhealthy oils

- In Australia, ingredients from GM crops are found only in highly processed foods

and cannot be purchased as fresh food. Australian laws require food containing 1 per cent or more GM ingredients to be labelled

- GM products from soybean, canola, corn, potato, sugar beet and cotton crops have been approved for use in food in Australia; for example, in corn flakes or cooking oils

- Only GM canola and cotton are commercially grown here, although trial GM wheat and barley varieties are being grown in preparation for commercial release post-2016. All other GM-based food products sold in Australia are imported



JAMES JEFFREY

Need for speed

LIKE his semi-namesake William Jefferson Clinton, British Foreign Secretary William Jefferson Hague is not lacking in the storytelling department. Hague was at the Australian British Chamber of Commerce lunch at Sydney's Hilton yesterday, where attendees included Malcolm Turnbull, Andrew Stoner and Josh Frydenberg, our freshly minted high commissioner to Britain Mike "Bored of the Lance" Rann and British high commissioner Paul Madden. Hague recalled a trip to Yorkshire so his old friend Sebastian Coe — superstar runner, Tory, London Olympics organising king — could receive the keys to Sheffield*. Behold: Journos: "Is this the year, Mr Abbott, that both sides take personality out of the debate

became conservatives because they grew up in the Socialist Republic of South Yorkshire. As Hague told the audience yesterday, Coe replied: "I don't know about that, but if you grew up in Sheffield and your name was Sebastian, you had to learn to run." (*Strewth has fond memories of a billboard on Sheffield's outskirts depicting a set of cutlery accompanied by a sentence of impeccable logic: "If it isn't stamped 'Made in Sheffield', then it isn't made in Sheffield.")

Playing the ball

OPTIMISTIC question of the day, courtesy of a journalist at Tony Abbott's press conference in Sydney yesterday. Behold: Journos: "Is this the year, Mr Abbott, that both sides take personality out of the debate

when it comes to the election?" Abbott: "As far as I'm concerned, we have always been focusing on the issues and I think every time the government resorts to personality politics, every time the government resorts to the relentless negativity that we have seen from them, it just shows that they have no positive plans for the future of our country."

With a grain of salty

A ROBUST turn of phrase from advertising and marketing magazine *B&T* yesterday: "In today's newsletter we look at Gecko's f... king brave rebrand." As *B&T* goes on to explain, "Adventure travel operator Gecko's Adventures has unveiled a new 'raw and real' approach to

marketing with swearing now part of its lingo." Well, it can't all be sonnets; we'd all go mad.

Back in Griffith

KEVIN Rudd apparently has a clone, earlier this week praising "silent, solid contributors not out there... strutting their stuff for the nightly news". Clearly this rogue doppelganger will have to be captured and reprogrammed. The more familiar Rudd, however, has further demonstrated how seriously he's taking this Wholly Roamin' Emperor business, yesterday stressing his availability for campaigning across The Entire Country. Meanwhile, Bill Glasson — Rudd's LNP rival for the fair hand of Griffith — appears to be somewhat less ambitiously restricting his attentions to the electorate. On ABC Brisbane

yesterday, Glasson spoke of Griffith (or, more specifically, "Griffiths"; ahem) and the incumbent: "Well, yep, I've met (Rudd) on a number of occasions. He's not an easy man to meet." And then there was this singularly arresting image of our great trading partner: "... to see China as it comes out today, this huge economic sort of powerhouse, that you know we're hanging on the back of, like a little koala, hoping (it) to be our saviour."

Tea, sea

SURREALIST Andrew Baines is a rare sort of bloke, able to persuade people to don suits and wade into the sea, or even perch all day on excessively public toilets. In the name of art, of course. He'll be at it again on Sunday at Adelaide's Henley

Beach, an act of art for charity, with Beyond Blue as the recipient. Baines told Strewth that this time, participants will be standing in the sea drinking tea, among them senator Nick Xenophon, state deputy opposition leader Steve Marshall, Natasha Stott Despoja, lobbyist Ian Smith, broadcaster Bob Francis, local Mayor Kirsten Alexander (in full regalia), and possibly Jeff Kennett, along with 200 volunteers in suits and bowler hats. Says Baines, "This will be my Magnus opus! I even had an email from a bloke coming over from Vancouver, who wants to know if he can wear a black turban." Baines tells Strewth the ever-sporting Amanda Vanstone — a veteran of Baines's Coalition of the Constipated Toilet-themed work — may also join the Henley tea party: "She said if she can get out of bed that early on Sunday

morning, she will be there." She approaches these things wisely.

Musos on the tiles

IT was good to see *The Daily Telegraph* running terrific snaps of Russian alpine horn player Arkady Shilkloper, greeting the dawn with a mighty blast from the top of Sydney's Opera House. Said Shilkloper: "It was unusual because no musician has been on top (of the Opera House) — and no Russian — so I'm the first Russian musician to be on top." No and yes. Years back, at the end of a concert, uilleann piper Dicky Deegan and didgeridoo player Mark Atkins were spirited to the tops of the main sails, where they played for the audience as it filled out into the night. It can safely be said neither is Russian, though. strewth@theaustralian.com.au