

**BANANA BIOPIRACY:
AN OPEN LETTER TO QUT'S DR JAMES DALE,
THE BILL AND MELINDA GATES FOUNDATION
AND THE CONVENTION ON BIOLOGICAL DIVERSITY ¹**

Mantasa



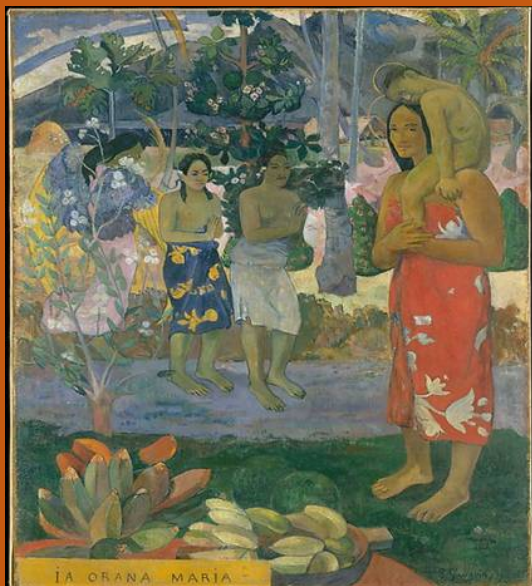
Paul Gauguin, Le Repas (The Meal), 1891

The Gates Foundation has invested 15 million dollars in Dr James Dale's GMO so-called 'super-bananas' developed at Queensland University of Technology (QUT) since approximately 2005. The project is being touted as philanthropy with a humanitarian purpose in combating micronutrient deficiency. The GMO bananas have gained considerable media attention for the project, but it is not at all clear that the GMO banana project is truly a charitable exercise. It is however a clear case of biopiracy.

Fe'i bananas (*Musa troglodytarum* L.) are a traditional food across the Asia-Pacific, found in an area ranging from Maluku in Indonesia to Tahiti and Hawaii in the Pacific. Until fairly recently local consumption of Fe'i bananas across the region had been largely displaced by imported, unhealthy, colonial food cultures.

¹ Extracted from: Mantasa. "No Gmo Banana Republic – Stop Banana Biopiracy!" *Seed Freedom*. Last modified October 12, 2014. <https://seedfreedom.info/no-gmo-banana-republic-stop-banana-biopiracy/>

In the early 2000's US researcher Lois Englberger, living in Micronesia, after searching for sources of vitamin A in the traditional diet of Micronesia, found that Micronesian 'Karat' bananas – so called because of their orange 'carrot-like' flesh and subsequent high beta-carotene content – had been traditionally used in Micronesia as an infant weaning food².



Paul Gauguin, *La Orana Maria (The Virgin Mary)*, 1891

Based on Englberger's work, the Federated States of Micronesia have an ongoing program to bring back and encourage the cultivation and consumption of these local banana varieties³. Englberger's work with the Island Food Community of Pohnpei in FSM has seen the use of these varieties widely adopted in a campaign called 'Let's Go Local!'. The program has been so successful that the Karat banana has been adopted as the state emblem of Pohnpei⁴.

Englberger's work however, did include nutritional surveying of pacific banana cultivars in Australia held in collection by the Queensland Department of Primary Industries⁵:

"What Dr Dale has done is to take the high beta-carotene banana gene for his GMO 'super-bananas' from an existing Fe'i banana variety from Papua New Guinea, following a study⁶ that compared ten cultivars with yellow to orange fruit. The 'winner' was the Asupina cultivar⁷, which had the highest level of trans beta-carotene – the most important pro-vitamin A carotenoid. . . more than 25 times more than the level in the Cavendish cultivars that dominate the international banana trade. The trouble is, this makes Dr Dales' GMO 'super-banana' a clear case of biopiracy. The original Asupina, collected 25 years earlier from Papua New Guinea and held by the Queensland Department of Primary Industries (Q-DPI), is the rightful property of the nation and the communities that developed it" ⁸.

² Englberger, L., Darnton-Hill, I., Coyne, T., Fitzgerald, M.H. and Marks, G.C. 2003. Carotenoid-rich bananas: A potential food source for alleviating vitamin A deficiency. *Food and Nutrition Bulletin* 24(4):303-318. <http://www.musalit.org/seeMore.php?id=8855>

³ Coghlan, Andy. "Orange Banana to Boost Kids' Eyes." *New Scientist*, July 10, 2014. <https://www.newscientist.com/article/dn6120-orange-banana-to-boost-kids-eyes/>

⁴ Radford, Tim. "Carrot-like Banana Could Save Lives in the Tropics." *The Guardian*, July 8, 2004. <http://www.theguardian.com/uk/2004/jul/08/research.health>

⁵ "Asupina." *The Banana Knowledge Platform of the ProMusa Network*. <http://www.promusa.org/Asupina>

⁶ Mlalazi, Bulukani, Welsch, Ralf, Namanya, Priver, Khanna, Harjeet, Gei-jskes, Jason, Harrison, Mark, Harding, Rob, Dale, James, & Bateson, Marion (2012). Isolation and functional characterisation of banana phytoene synthase genes as potential cisgenes. *Planta*, 236(5), pp. 1585-1598. <https://eprints.qut.edu.au/52937/> & http://eprints.qut.edu.au/52937/1/Mlalazi_2012_-_Accepted_PSY_draft_manuscript_-_ePrints_version.pdf

⁷ Ibid.

⁸ Breasley, Adam, and Oliver Tickell. "Why Is Bill Gates Backing GMO Red Banana 'Biopiracy'?" *The Guardian*, November 24, 2014. <https://theecologist.org/2014/nov/24/why-bill-gates-backing-gmo-red-banana-biopiracy>

The Asupina is not a wild variety as Dr Dale has claimed⁹ – it is a domesticated cultivar from PNG. It is also not unpleasant to eat as Dr Dale has also claimed. As Englberger was at pains to point out, there are Fe'i banana varieties that are delicious when eaten raw, baked or boiled.



Paul Gauguin, (Tahitian Landscape), 1891

Dr Dale's globe-trotting GMO bananas are a globe-trotting case of biopiracy. The traditional knowledge they have used comes from Micronesia and Lois Englberger's work. The Q-DPI public collection from which Jeff Daniels sourced the Asupina variety should have been a collection held in public trust. Their GMO 'super banana' project, on which Dr Dale holds multiple patents for 'banana transformation', now proposes to

sell these purloined treasures back to the world as their own patented product from which they can derive royalties, determine access, and is ironically being offered up as an act of charity. Rather this is an act of biocolonialism.

Moreover, the GMO 'super-bananas' are an expensive distraction away from real solutions for vitamin A deficiency. We do not need to waste time and millions on GMOs when we have viable existing solutions that are based on biodiversity and available right now. Malnutrition is a complex problem that cannot be solved by monocultural solutions whether of the mind or of the field, not by 'Golden Rice' nor the cartoon solution of GMO 'super-bananas'.

Taking resources away from communities can only be done violently.

The GMO banana project began violently, with the unacknowledged theft of traditional knowledge and cultural heritage of local communities and farmers in PNG and Micronesia, which has now been enclosed in patents for 'banana transformation'.

It continued violently with the Market Trials conducted on unsuspecting human subjects in Iowa - female students, who were being paid 900 dollars to turn themselves into human guinea pigs, while no safety tests for human consumption of the GMO bananas have been done.

⁹ Huizen, Jennifer. "'Super Bananas' Enter U.S. Market Trials." *Scientific American*, July 1, 2014. <https://www.scientificamerican.com/article/super-bananas-enter-u-s-market-trials/>