

Genetically Engineered 'Golden Rice' is Fools Gold

Manila/Amsterdam, 9th February, 2001 – Genetically engineered “Golden Rice” containing provitamin A will not solve the problem of malnutrition in developing countries according to Greenpeace. The Genetic Engineering (GE) industry claims vitamin A rice could save thousands of children from blindness and millions of malnourished people from vitamin A deficiency (VAD) related diseases. But a simple calculation based on the product developers’ own figures show an adult would have to eat at least twelve times the normal intake of 300 grams to get the daily recommended amount of provitamin. A (1)

Syngenta, one of the world’s leading genetic engineering companies and pesticide producers, which owns many patents on the “Golden Rice”, claims a single month of marketing delay of “Golden Rice” would cause 50.000 children to go blind. (2)

Greenpeace calculations show however, that an adult would have to eat at least 3.7 kilos of dry weight rice, i.e. around 9 kilos of cooked rice, to satisfy his/her daily need of vitamin A from “Golden Rice”. In other words, a normal daily intake of 300 gram of rice would, at best, provide 8% percent of the vitamin A needed daily. A breast-feeding woman would have to eat at least 6.3 kilos in dry weight, converting to nearly 18 kilos of cooked rice per day. (3)

“It is clear from these calculations that the GE industry is making false promises about “Golden Rice”. It is a nonsense to think anyone would or could eat this much rice, and there is still no proof that it can provide any significant vitamin benefits anyway,” said Greenpeace Campaigner Von Hernandez in the Philippines, where the first grains of the genetically engineered rice had been delivered to the International Rice Research Institute last month for breeding into local rice varieties. “This whole project is actually based on what can only be characterised as intentional deception. We recalculated their figures again and again, we just could not believe serious scientists and companies would do this.”

In addition, one of the main sponsors of “Golden Rice”, the Rockefeller Foundation, has told Greenpeace the GE industry has “gone too far” in its promotion of the product. While upholding its principal support for the project, Rockefeller Foundation President Gordon Conway, wrote to Greenpeace:

"[...] the public relations uses of Golden Rice have gone too far. The industry's advertisements and the media in general seem to forget that it is a research product that needs considerable further development before it will be available to farmers and consumers."(4).

“The European markets have resoundingly rejected GE products, consumers worldwide don't want them in their food, and the industry is desperate for alternative markets. “Golden Rice” has been presented as a quick fix for a global problem. It isn't, and the cash-driven propaganda about the product is swamping attempts to enforce existing effective solutions, and carry out further work on other sustainable, reliable methods to address the problem,” added Hernandez.

Genetically engineered rice does not address the underlying causes of vitamin A deficiency (VAD), which are mainly poverty and lack of access to a more diverse diet. For the short-term, measures such as supplementation (i.e. pills) and food fortification are

cheap and effective. Promoting the use and the access to food naturally rich in provitamin A, such as red palm oil, will also help addressing the VAD related sufferings. The only long-term solution is to work on the root causes of poverty and to ensure access to a diverse and healthy diet. (5)

For more information:

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1. United Nations' World Health Organisation/Food and Agriculture Organisation and the US National Academy of Science recommendations on daily vitamin A intake.
2. Dr. Adrian C. Dubock, of *Zeneca Plant Science* (now *Syngenta*): "The levels of expression of pro-vitamin A that the inventors were aiming at, and have achieved, are sufficient to provide the minimum level of pro-vitamin A to prevent the development of irreversible blindness affecting 500.000 children annually, and to significantly alleviate Vitamin A deficiency affecting 124.000.000 children in 26 countries." "One month delay = 50,000 blind children month." at a conference on "Sustainable Agriculture in the New Millennium" in Brussels, May 28-31, 2000
3. Greenpeace briefing paper "Vitamin A: Natural Sources vs Golden Rice" and "The false promise of GE rice" are available at <http://www.greenpeace.org/~geneng/>
4. Letter to Greenpeace UK , January 22nd, 2001 <http://www.greenpeace.org/~geneng/>
5. Nutritionists have pointed out that numerous problems converge to cause vitamin A deficiency. In a recent letter to the New York Times, Dr. Marion Nestle noted that "conversion of beta carotene to vitamin A, and transport in the body to the tissues that use vitamin A, require diets adequate in fat and protein. People whose diets lack these nutrients or who have intestinal diarrheal diseases – common in developing countries – can not obtain Vitamin A from golden rice."