

IBFAN Additional Comment to the second consultation on biofortification, July 2016

General comments:

The method of using genetic modification as a means to “nutritionally enhance” crops has devastated many family farms; increased factory farming; increased the costs of agricultural inputs; destroyed bee and butterfly populations; increased the prevalence of allergies in human populations and other unknown health impacts; and health impacts of agricultural methods using genetic engineering and the serious health impacts of the pesticide products that accompany their production ^{1,2,3}.

Claims of increased production and improved nutrient content have not materialized.

The impact of biofortified crops on malnourished and undernourished populations has not been adequately investigated. Little is known about the safety and efficacy when compared to increased dietary diversity, nor the impact on immunocompromised and vulnerable populations. Malnutrition in young children is a multifactorial condition and generally precipitated by malaria, parasites, or infectious illness such as diarrheal disease and respiratory illness.

Questions have been raised about the possible impact of single nutrient focussed agriculture on biodiversity and the diversity of foods available to support local diets.

What claims will be made for these “enhanced” products? Will they be promoted to appear to be better than normal farm crops and indigenous food crops? What impact will these crops have on crop diversity?

Will the biofortification industries claim to reduce nutrient deficiencies and malnutrition? Will the claims being made on the rationale of reducing rates of malnutrition, obscure the real intent to increase the markets for agricultural inputs with industrially genetically modified seeds? Is a similar model to genetically modified foods being used to promote “biofortified” foods and products as the champion to address global malnutrition?

Nutrients such as vitamin A can readily be accessed with emphasis on the growth of vitamin rich foods such as green leafy vegetable and other carotene rich foods combined with nutrition education. Such approaches can cover the wide breadth of nutrients required and provides sustainable local solutions to addressing situations of nutrient under nutrition.

The lack of consumer acceptance of staple foods with altered colour and texture has also been documented.

IBFAN is also concerned about the lack of independent and substantive evidence to determine the safety of foods that are genetically modified. Studies such as the Diels⁴ review demonstrates that research with financial or professional conflicts of interest is associated with outcomes that “cast genetically modified products in a favourable light”.

And IBFAN is also concerned that biofortified ingredients in ultraprocessed foods, high in salt, sugar and saturated fats can be promoted with the use of nutrition and health claims to mask the health risks of obesity and NCDs associated with such foods.

1. Székács, A. and B. Darvas (2012). Forty years with glyphosate. *Herbicides - Properties, Synthesis and Control of Weeds*. M. N. Hasaneen, InTech.
2. Benedetti, D., et al. (2013). Genetic damage in soybean workers exposed to pesticides: evaluation with the comet and buccal micronucleus cytome assays. *Mutat Res* 752(1-2): 28-33.
3. Lopez, S. L., et al. (2012). Pesticides used in South American GMO-based agriculture: A review of their effects on humans and animal models. *Advances in Molecular Toxicology*. J. C. Fishbein and J. M. Heilman. New York, Elsevier. 6: 41–75.
4. Diels J, et al. (2011) Association of financial or professional conflict of interest to research outcomes on health risks or nutritional assessment studies of genetically modified products. *Food Policy*. 36: 197-203.