



HEALTH OF MOTHER EARTH FOUNDATION (HOMEF) FACT SHEET

NOT ON OUR PLATES!

Why Nigeria does not need GM food

The disclosure by the National Agricultural Biotechnology Development Agency (NABDA) that Nigerian government is working to fast track the adoption of genetically modified organisms (GMOs) at a press conference in Abuja (17 July 2014) is shocking for a number of reasons. The agency's pitch is more or less that if the doors are not officially open to GMOs Nigerians will be consuming them without knowing. The truth is that there are GMO products illegally in Nigeria and the government ought to be protecting the citizens rather than closing the doors on the Precautionary Principle which as the name implies urges caution in matters of this nature.

The Agency claims there are enough safeguards in place for the introduction of GMOs into Nigeria. These so-called safeguards include the following: a draft Biosafety Bill, biosafety application guidelines, biosafety containment facilities guidelines, and a variety of forms such as those for accreditation, GMO import and shipment form and a host of drafts. If *forms* and *draft* documents are listed as biosafety readiness tools we should be extremely suspect of such a state of readiness.

A Short History: Few Crops Commercialized, Numerous Rejections Of Gm Food

It was only twenty years ago that a genetically modified crop was commercialized in the USA for human consumption purposes for the first time. It was a GM tomato variety called the Flavr Savr. It failed in the marketplace and its commercialization ceased in 1997. That failure has been followed by numerous other failures in the past two decades.

The biotech industry has made several attempts to commercialize a wide range of GM varieties since the 1990s. However it quickly encountered stiff opposition. For instance in Europe strong opposition against GM foods took root since the end of the 90s and is still strong as of today.

In 2000 field trials with a variety of GM potato in Bolivia, centre of origin of the potato, were stopped in the face of public opposition. That same year GM potatoes were withdrawn in the US due to commercial failure. In 2002 a number of African countries rejected GM food aid and in 2004 GM wheat was withdrawn from the market due to commercial reasons. China suspended commercialization of GM rice in 2011 and the US did not proceed with wide commercialization either of such products. The failures to market GE staple food in the past twenty years have been very notorious.

Biotech Industry Targets Staple Foods

Maize, rice and wheat are the staple food of more than two thirds of the world's population, but as of now, no wheat and rice has been legally commercialized in the human food chain. Basically as of today, the GM crops that have been commercialized are soya, maize, oilseed rape and cotton. Most of these products are not intended directly for food, but for animal feed purposes. For instance, GM maize is strongly resisted in many countries like Mexico, centre of origin of maize, where a Federal Court in 2013 ordered that two of the main Mexican authorities for authorizing GM crops must abstain from granting permits of release into the environment of GM maize whether on a commercial or on an experimental basis.

While most GM crops are planted for animal feeds, those targeted in Nigeria are for our foods. Among the target crops is cassava, a staple for most citizens.

Few Countries, Few Traits, One Industry

The few crops commercialized during the past decades were composed only of two traits, and their area of cultivation has been limited to a handful of countries. Over 90% of GM crops grown are only in six countries –USA, Brazil, Argentina, India, Canada and China-, with one country alone accounting for 40 per cent of all GM global area: the USA.

In any case, in two decades of GM crops commercialization, up to 95% of the staple crops which have been commercialized are **insect resistant or herbicide tolerant**. The push for the introduction of these type of GM staple crops has been led either directly by the big biotech corporations that developed the product or their subsidiaries.

None of these traits, however provide any benefit to the consumer, and none of them as of today has managed to win the heart of the majority of the consumers. For instance, even in the US, the cradle of GM crops, a poll conducted by the New York Times in 2013 concluded that three-quarters of Americans expressed concern about genetically modified organisms in their food, with most of them worried about the effects on people's health. In The reality of such scepticism has forced the biotech industry to desperately seek to widen its market into Africa. The claim that Europe is influencing Africans to reject GMOs is nothing other than cheap blackmail.

More herbicides

Roundup Ready (RR), the most popular herbicide in the world, property of Monsanto, claimed when it was introduced that farmers would be able to use less herbicide. On the contrary it has been clearly proofed that, in less than two decades glyphosate resistant plant species have become a serious problem for US farmers and others around the world.

In addition to the growing use of RR, various scientific studies show concerns over health impacts of RR on humans. Besides the impact that may be caused by the herbicide directly, a scientific study published in a European scientific review has identified serious health impacts on rats fed on 'Roundup Ready' GMO maize.

Promote Food Sovereignty, not GMOs

Today a new propaganda effort to convince Africans is vigorously pursued by corporations and the development industry trying to convince us Africans that we need genetic engineering to overcome malnutrition and food shortages.

Institutions like USAID, and philanthropic organizations like the Bill and Melinda Gates Foundation are supporting efforts to genetically modify rice with enhanced levels of **Vitamin A** with the ostensible aim of keeping African children from being stunted and from going blind. Gates support of the creation of GM staple foods with nutritional traits derived from the fact that “in many developing countries, as much as 70 per cent of an individual's daily calories come from a single staple food, making it difficult to consume enough vitamins and minerals”.

Instead of promoting and supporting food sovereignty, one of its principles –diet diversification the GM promoters want us to keep our diet based on one food product for most of the day instead of supporting the tapping on the enormous food diversity existing in our countries, - such as fruits and vegetables, rich in Vitamin A and other valuable Vitamins.

Nigeria

Nigeria does not need GM crops to satisfy its food and agriculture needs. We know exactly what we have to do and the Nigerian National Conference ¹recently raised the caution with regard to the draft National Biosafety Bill. We urge that the President should not assent to the Bill because the draft is deficient in many areas including:

- a) **Public participation: The draft Bill does not make public participation obligatory when applications to introduce GMOs are being considered.**
- b) **The Bill does not specify clearly how large-scale field trials would be contained and regulated to avoid contamination of surroundings or farms.**
- c) **Besides Environmental NGOs, Farmer organisations are not represented on the Governing Board.**
- d) **Risk Assessment: The Bill does not state criteria for risk assessment nor does it stipulate that such assessments must be carried out in Nigeria and not offshore.** This is important because the effect of the GMO on non-target organisms has to be measured with non-target organisms that exist in Nigeria and are ecologically important.
- e) **Strict liability and provisions for redress are not included in the Bill. These is a key part to implementing the Kuala Lumpur-Nagoya Supplementary Protocol adopted 3 years ago**
- f) **Precautionary principle: The Bill should adhere to ensure the implementation of the precautionary principle that entitles our government to decide against approval or for restriction in cases of incomplete or controversial knowledge.** This is the essential feature of the CPB, driven by the interests of African negotiators and should be implemented in Nigeria.

¹ These came up in the debates on the Reports of the Committees on Environment as well as those on Science and Technology and Agriculture and Water Resources

GMOS Never Deliver on Their Promises²

1. **What is Eating You?** In 2004, the Kenyan government admitted that Monsanto's GM sweet potatoes were not any more resistant to feathery mottle virus than ordinary strains, and in fact produced lower yields. In January 2008, news that scientists had modified a carrot to cure osteoporosis by providing calcium had to be weighed against the fact that you would need to eat 1.6 kilograms of these vegetables each day to meet your recommended calcium intake.
2. **Extreme Costs:** In India, an independent study found that BT cotton crops were costing farmers 10 per cent more than non-BT variants and bringing in 40 per cent lower profits. Between 2001 and 2005, more than 32,000 Indian farmers committed suicide, most as a result of mounting debts caused by inadequate crops.
3. **Contamination:** In late 2007, US company Scotts Miracle-Gro was fined \$500,000 by the US Department of Agriculture when genetic material from a new golf-course grass Scotts had been testing was found in native grasses as far as 13 miles away from the test sites, apparently released when freshly cut grass was caught and blown by the wind.
4. **More Not Less Pesticides:** BT maize, engineered to produce an insecticidal toxin, has never eliminated the use of pesticides, and because the BT gene cannot be 'switched off' the crops continue to produce the toxin right up until harvest, reaching the consumer at its highest possible concentrations.
5. **Resistance by Nature:** Superweeds are emerging as nature evolves to withstand the biotech industry's chemicals
6. **Creating Problems for Solutions:** Herbicide-resistance was sold under the claim that because crops could be doused in chemicals, there would be much less need to weed mechanically or plough the soil, keeping more carbon and nitrates under the surface. But a new long-term study by the US Agricultural Research Service has shown that organic farming, even with ploughing, stores more carbon than the GM crops save.
7. **Health Risks:** The results of tests on animals exposed to GM crops give serious cause for concern over their safety. In 1998, Scottish scientists found damage to every single internal organ in rats fed blight resistant GM potatoes. In a 2006 experiment, female rats fed on herbicide-resistant soybeans gave birth to severely stunted pups, of which half died within three weeks. The survivors were sterile. In the same year, Indian news agencies reported that thousands of sheep allowed to graze on BT cotton crop residues had died suddenly. Further cases of livestock deaths followed in 2007. There have also been reports of allergy-like symptoms among Indian labourers in BT cotton fields.
8. **No Higher Yields:** The story that GM crops yield higher is nothing other than mere stories. Considering that the best seeds are selected for modification, it is a huge minus that GM crops do not generally yield more than natural seeds.
9. **GMOs are linked to artificial fertilizers and fossil fuels.** The use of these two contribute to climate change.
10. **GMOs depend on industrial, large-scale mono cropping** thus negating the facts of our integrated agricultural systems and getting set to promote land grabbing and impoverishment of our population of farmers.

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² Adapted from an article by Mark Anslow in The Ecologist, March 1, 2008.

This Fact Sheet is issued by **Health of Mother Earth Foundation (HOMEF)**, the ecological think tank. Contributors: Juan Lopez (Biosafety expert), Mariann Orovwuje (Food Sovereignty coordinator, Friends of the Earth Africa) and Nnimmo Bassey (HOMEF)

Full References available on request. For more information contact us at home@homef.org or visit www.homef.org, Top Floor, #214 Uselu-Lagos Road, P.O.Box 10577, Ugbowo, Benin City, Nigeria.