



## EDITORIALS

### The GM debate is about more than biosafety

David Dickson

28 April 2011 | EN | ES | □□

**Biosafety is important, but so is ensuring that GM crops benefit the rural poor and that decisions are based on sound science.**

Next month (May), after almost a decade of intense debate, Kenya is expected to become the third country in Sub-Saharan Africa — after South Africa and Burkina Faso — to approve the commercial planting of genetically modified (GM) crops.

Other countries are not far behind. By 2015, Malawi, Mali, Nigeria, Tanzania, Togo and Uganda and could all be growing GM crops such as maize, rice, wheat, sorghum and cotton, according to a report published by the industry-sponsored International Service for the Acquisition of Agri-biotech Applications (ISAAA).

This marks a potential victory for evidence-based policy. Despite claims to the contrary, there are no documented health or environmental problems linked to GM crops.

No one denies that there are potential risks associated with planting GM crops, such as the unknown consequences of implanted genes spreading to native varieties, a concern raised in Mexico after a field trial of GM maize was authorised. But this is a reason to ensure that GM crops are closely monitored and regulated, not banned.

Biosafety laws need to be in place before farmers can grow GM crops, and this is where Nigeria's progress towards adopting the technology has faltered.

Yet by focusing on biosafety, the political debate on GM crops may overlook the broader — and more significant — issue of how such crops will be used in practice. This includes the extent to which they will meet the needs of poor farmers, who are responsible for a large proportion of Africa's agricultural output.

The big challenge ahead for those engaged in the GM debate in Kenya and elsewhere in Africa is not how to promote (or block) the technology, or even demonstrate its safety, although this is clearly important.

Rather, it is to find ways to ensure that GM crops benefit the rural poor, not just the shareholders of multinational corporations who are increasingly looking at African agriculture as a profitable investment.

#### A question of priorities



Poor farmers must have a say in decisions about GM technology  
Flickr/IRRI

The cost of GM seeds is one reason for concern. This is one way that agricultural corporations are keen to generate a profit on their substantial investment in both laboratory research and field trials, just as pharmaceutical companies do through drug prices.

And by using intellectual property laws, corporations can take ownership of genetic material, undermining the staple practice of farmers using (and sharing) their own seed from one year to the next.

Then there is the danger of biodiversity loss — with its impacts on insect and bird varieties — if farmers focus excessively on increasing production of the most profitable crops.

None of these problems are created by GM technology. It is quite possible to imagine GM seeds being distributed at marginal costs (like generic medicines) and being grown and distributed by farmers free of concerns over patent infringement.

Similarly, GM crops can be used to counter biodiversity loss. By introducing viral resistance genes into cassava, for example, scientists aim to increase the range of crops available by helping to preserve farmers' preferred cassava varieties, which are currently being devastated by viral diseases across East and Southern Africa.

Whether GM crops benefit all farmers therefore depends on how the technology is used. National agricultural policies need to take into account the interests and priorities of poor farmers, and give rural communities sufficient leverage over decision-making to ensure that GM crops meet locally defined needs.

### **Sound science**

Even though these are political and economic considerations, not biosafety issues, they can determine the content of regulations in individual countries. These will differ according to national needs and priorities, but they share two essential requirements.

The first is that all regulations, and the debates that occur around them, must be based on sound scientific grounds. Those who make exaggerated and simplistic claims for which there is no evidence — that GM crops are sufficient to eliminate hunger in the world, for example, or that they are a poison that contaminates the environment — are serving no one's interests but their own.

The second requirement is greater transparency. The more that multinational corporations seek to hide their involvement in lobbying for biosafety regulations, the greater the risk of criticism when their involvement becomes known.

For example, when WikiLeaks revealed the involvement of the US Embassy in Nairobi in helping to secure initial approval of Kenya's biosafety legislation two years ago, there was a backlash from environmental NGOs.

Science journalism has a key role to play in ensuring that both these needs are met. It can query the scientific basis of claims both in favour and against GM crops. It can also make the regulatory process more transparent and ensure that it withstands public scrutiny by monitoring and reporting on special-interest groups.

No one expects GM crops to be the magic key to eliminating hunger in Africa. But neither, if they are properly regulated, need they produce the environmental Armageddon that opponents predict.

The real challenge is how best to achieve the benefits, including those it offers to small farmers, while identifying and minimising the potential risks — and maintaining public trust along the way. Sound science, full transparency, and a media committed to both are three steps in this direction.

David Dickson  
Director, SciDev.Net

## COMMENTS (6)

**sarahlouq** ( United Kingdom )  
28 April 2011

My research indicates that the GM debate and implementation of the CPB relates more to development ideologies rather than risk.

**Chuck Benbrook** ( United States of America )  
2 May 2011

Good article. The impacts of GE crops in Africa will be determined by many forces/factors, including the land grab underway, the likely historic increase in food prices, and the efforts of the seed/biotech industry to lock up germplasm and the seed supply. Once choice in seeds and genetics — and GMO or not GMO — is constrained, farmers will pay more, way more, just ask US cotton, soy, or corn producers, paying 3-X to 6-X more for seed that delivers only modest (if any) pest management benefits.

**geberew** ( Canada )  
3 May 2011

I think this is a fairly balanced editorial.

Having said, that I would like to mention few points:

(i) I always do not understand why agriculture in most developing African countries is expected to perform well if farmers use GM crops. In a situation where even the supply of conventional agricultural inputs such as improved seeds, fertilizers, storage facilities, water supply systems etc. are not adequately available, what magic do GM crops have to transform agriculture in Sub-Saharan Africa? The pressure we witness exerted on Africa for the last several years is for Governments to open up their countries for GM varieties.

(ii) So far, I have not heard of GM crop that results in intrinsic increase in yields. The GM crops that have been commercialized have some agronomic advantages. They decrease labour demand, which is not a critical problem for African farming communities. They allow the application of certain chemicals/herbicides - which are not easily accessible or affordable by the African poor farmer. So, what is the unique and superior advantage of cultivating GM varieties that we have to day. I share the assertion made in the editorial that the GM debate is more than biosafety. In my view, GM varieties may be accessible to poor farmers on some special or preferential arrangements. But in the long term the farmers will be tied to certain chemicals and agribusiness companies leaving their future uncertain. These varieties need to be specifically designed to be effective and sustainable in African situation. We are not dealing with a technology such as mobile phones that could easily be acquired and applied in rural Africa. Farming is a mode of life, a socio-economic system. The development of GM crops is the result of a highly advanced and commercial agricultural system of the developed world. You cannot insert such a high tech technique into an archaic and subsistence farming and expect things to go well. Let the world help Africa in conventional...

**Alejandro Camino** ( Peru )  
3 May 2011

Who is sponsoring SciDev Net for its continuous pro GMO campaigning??

Dr. Mae Wan Ho Phd., noted geneticist, Nobel prize Candidate, says of GMO: "GMO genetics is big business with bad science"

Why not interview her for SciDev???

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**Naiyyum Choudhury** ( Bangladesh )

4 May 2011

I agree with your comments that there are exaggerated demands about miracle of GMOs particularly GM crops. I am fully convinced with sound scientific basis of development of golden rice. But is golden rice really a solution for the millions suffering from night blindness as claimed? Night blindness like many other vitamin deficiency diseases is due to poverty and lack of proper diet. And this is not due to lack of consciousness but lack affordability. Let us answer a simple question. Is golden rice going to be cheaper than or at least as cheap as course rice in the market which the poor can afford. Common sense dictates the answer is no. Will the government buy golden rice or afford to buy for the poor for use as staple food? Can a government in a developing country afford that? If the option is between buying vitamin A capsule which runs for 6 months and buying golden rice for vitamin A deficiency mitigation which option will be chosen? How about the small farmers who represent the majority of farmers in developing countries, who depend on traditional agricultural practices? Finally when IRRI was developed there was no question about its acceptability. I have a feeling if the new biotechnology products were developed by public sectors laboratories so many questions would not have been asked. Brains have been hijacked and in the name of intellectual property rights, knowledge has been privatised. It seems that science is no more universal it has become a a commodity to be sold a profit only.

**Thought+ Food** ( United States of America )

4 May 2011

Very balanced article that makes valid points for the GM debate, not only in Africa, but also elsewhere. I particularly appreciate the point about the role of science journalism. The public is either misinformed or uninformed on this issue and the typical person simply identifies biotechnology with Monsanto and "Frankenfoods". It is time people were encouraged to inform themselves and decide on the merits of this technology before condemning it out of hand.

<http://apppy.wordpress.com>

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<http://www.scidev.net/en/editorials/the-gm-debate-is-about-more-than-biosafety-1.html>

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