



*Delegates participate in a 'seeing is believing tour' on a PBR Cow Peas plantation in Nigeria.
Photo Credit: AATF*

To grow or not to grow: The GM crops dilemma in Africa

By Dr Francis Nang'ayo

THE potential revolution in farming made possible by GM crops has been met with monumental controversies, resulting in a great deal of ambivalence regarding policies for regulating this new technology.

Whereas farmers, mostly smallholder farmers, in some developing countries, have adopted GM crops and are now growing them commercially, most other countries in the world have taken a much more precautionary approach, ranging from policy restrictions of various kinds to outright bans.

In most other African countries, a complex and controversial global debate on GM technology seems to have steered the continent to a more cautious attitude towards GM crops. Way back in 2002, Zambia was reported to have declined GM

maize donated as food aid even as the country reeled from a serious drought that threatened millions of people with food insecurity.

The narrative was the same in Zimbabwe, which only accepted the food aid donation with a caveat that it is supplied in milled form and not as grain. Some other African countries such as Angola and Benin went to extreme lengths of imposing bans and moratoria against GM products.

The handful of countries in Africa that embraced GM technology did so by establishing regulatory systems to oversee research and development (R&D) in modern biotechnology, a move that has witnessed progress with confined field trials (CFTs) on some half dozen crops in Uganda, Kenya, Ghana, Cameroun, Malawi and Nigeria.

However, going by the way these CFTs are installed and managed, including high-security fencing and round-the-clock security at testing sites, the general attitude across the continent remains one of extreme precaution on matters biotech. Matters almost got worse in 2012 following the controversial publication regarding safety of GM foods by a team French scientists.

There were claims in this publication that purported to link development of tumours to consumption of feed derived from genetically modified maize.

This publication attracted wide-ranging global attention from consumers, scientists, industry, academia and policy makers as all and sundry sought to establish the validity of claims in the said publication.

Nearly a dozen professional toxicological societies, food safety agencies and academies of sciences are on record to have issued expert opinion and position statements on this matter, clearly identifying the flaws in the study and the erroneous inferences.

At the end of it all, it was concluded that the paper did not have the scientific merit necessary for decision making, and that in fact, the paper was too flawed to be published.

This misleading paper was later retracted from the journal that had published it, putting that controversy on GM food safety to rest. At last a rational, scientific assessment of GM technology triumphed over prejudice, fear, and speculation!

This cloud of uncertainty probably serves to explain why Africa, the second-largest continent with 55 nation states, inhabited by an

estimated 1.2 billion people grows the least proportion of (2.3%) of the world's GM crops. This is ironical considering so many countries in the sub-Saharan Africa have been struggling for decades with unsolved farm productivity problems some of which could be addressed through GM technology.

Policy Choices

Respected scholar Robert Paarlberg, in his book titled *The Politics of Precaution*, argues that regulating GM crops, a new and controversial technology, typically revolves around two diametrically opposite considerations.

On one hand, some countries are more driven by the inclination to promote adoption of GM crops (for whatever reasons) while at the other extreme are countries more driven by the inclination to prevent adoption of transgenic crops.

The former category is termed 'promotional' policy choice and the latter as 'preventive'. There are, of course, gradients between promotion and prevention leading to a scale of four possible policy postures.

Kenya, for example, started off with a precautionary policy posture when it became the first country in the world to sign the Cartagena Protocol on Biosafety, way back in 2000. Then in 2012, it was a big surprise to see a country that had made progressive steps to establish one of the most robust regulatory frameworks for modern biotechnology in Africa, ranking only second to that of South Africa, take turn that represented a giant leap backwards with a cabinet slapping a ban on GM food imports.



Participants of a biotechnology event organized by NABDA in a 'eating is believing' session of ankara made of PBR Cow Peas. Photo Credit: AATF

In Uganda, just like in Kenya, the country started off with a precautionary policy posture when it signed and ratified the Cartagena Protocol, and later published the Guidelines and Regulations and adopted a National Biotechnology Policy in 2008. These early efforts enabled field testing of several GM crops in confinement for nearly a decade.

However, advances in the biotechnology agenda are potentially at risk of stagnation if precautionary considerations in Uganda fuelled by the on-going sensational GM debate continue to delay the passage of the Biosafety Law that has been in and out of Parliament several times. Even the overwhelming pledge for support of the Biosafety Bill by the NRM administration appears not to have marshalled the necessary traction for this critical legislative process.

Many other African countries have taken the extreme policy of either consciously or inadvertently positioning themselves to prohibit the adoption of GM crops. The case of the strict liability and redress regulatory regimes that are currently decreed in Tanzania and Togo serve to illustrate this point.

In legal parlance, strict liability pre-assigns fault to a specific party and imposes absolute legal responsibility for an injury or damage on the suspected wrongdoer regardless of whether that party is at fault or has taken the necessary care.

Despite existence of biosafety legislation and institutional frameworks in these countries, no CFTs for GM crops have ever been conducted in these countries.

Although the application of GM technology is hailed as a major success in many parts of the world, there are persistent concerns about the safety and ethical and trade-related aspects of GM products to consumers and the

environment, necessitating the need for their regulation.

In formulating a national regulatory policy for GM technology and GM food, countries often take into consideration both the opportunities presented by the GM crops and the potential risks associated with them. In Africa there are 55 nation states with diverse political persuasions, trade considerations and environmental interests.

As such, Africa is characterised by a mosaic of national policy positions on GM technology, ranging from those which can be considered to be permissive to those which are more precautionary and ultimately to those which are preventive to the adoption of GM crops.

Admittedly, public opinion on GM technology in many parts of the world, particularly in Africa, is still steeped in controversy. As a result, public policy on GM technology in many African states is laced with

precautionary overtones.

In these circumstances, regulatory regimes have emerged that implicitly assume that all GMOs present high risks unless proven otherwise, an approach which often requires inordinate amounts of information and data to be included in the safety dossier for regulatory clearance. Some analysts have rightly observed that setting regulatory safety standards on such an impossibly high oversight pedestal is a sure way of keeping GM crops from these countries, thereby depriving their farmers of the benefits of such technologies.

Africa needs a rigorous, responsible and predictable regulatory environment to take GM crops to market.

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Participants are served Ankara made of PBR Cow Peas. Photo Credit: AATF