

PARALLEL WORKSHOP SESSION I

African agriculture under threat: GM crops in the wider context

Summary of the workshop, 7 May 2015, Berlin

10:45 - 12:30 Thuringia Representation

1. The Green Revolution Push in Africa

Mariam Mayet, African Centre for Biodiversity (ACB), South Africa

The Green Revolution push in Africa has been facilitated largely by the Alliance for a Green Revolution in Africa (AGRA), for which the Bill and Melinda Gates Foundation and the Rockefeller Foundation are the central players. The push is led by what is actually a coalition of the old hubs of capital as shown by the substantive involvement of the US, EU, the G8 New Alliance on Food Security and Nutrition and USAID.

The corporate drivers are Monsanto, Syngenta, Yara and many others. The involvement of philanthrocapitalist organisations such as the Gates and Rockefeller Foundations is also tied to the fact that Gates has Monsanto shares, and owns proprietary technologies, while Rockefeller is funding the CGIAR institutions. Other players include the World Bank, which is interested in using the big swathes of land that are fertile with access to waters – the Guinea Savannah – to push commercial and industrial agriculture in Africa.

The Guinea Savannah coincides with AGRA's map of breadbasket areas, wherein it is playing a central role in enhancing the political landscape, setting up value chains etc. Their logic is a linear standardised model of increasing yields and expanding cultivation in the most fertile areas that already have some infrastructure.

AGRA has earmarked areas in Tanzania and Mozambique for development; these are aligned to ports, the energy industry, getting fertilisers in and resources out of Africa. The result is an extractive capitalist project.

The Green Revolution agenda comprises a technological package; putting the institutional structure in place – legal, administrative and technical; large-scale commercial farming, including plantation and contract farming arrangements; and recognition of the importance of the small-scale farming base in Africa, but in the context of linking them to markets and for export purposes. The two main strategies are to integrate African agriculture into corporate chains for export, and to grow commercial small-scale farming, with increasing economies of scale over time.

The logic is that Africa has huge resources but low productivity, so there is a need for linear modernisation with standardised value chains and subsidised inputs. The motive is profit and competition as drivers of the economy. All this is achieved via the use of state institutions.

The Green Revolution push has focused on seeds and land, and this is where the issue of genetically modified (GM) crops fits it. The rationale is that higher investments in land will

“induce land holdings to adjust”, which in reality has resulted in a concentration of land holdings and dispossession. Surveying and the granting of individual titles has been a focus of the New Alliance, but surveying is also seen as the first step in the commodification and alienation of land. There has also been infrastructure development around irrigation schemes.

For the GM industry to work, there is a need to get a closed value chain up and working, at least initially for hybrid seeds. This has to be put in place via legal and policy frameworks. As a result we have seen an expansion of private ownership of land and germplasm, facilitated through intellectual property and plant variety protection regimes. There is a big push for changes in seed laws and harmonization of plant variety protection based on UPOV 1991 – all to facilitate the entry of the private sector.

In the 20 years since the global introduction of GM crops, only three African countries have approved cultivation – South Africa (1997, cotton, maize, soya), Burkina Faso (2008, Bt cotton) and Sudan (2012, Bt cotton). Forty-two African countries are Parties to the Cartagena Protocol on Biosafety, but only a handful have implemented domestic biosafety frameworks.

However, USAID has funded capacity building, technology transfer and infrastructural development, while the Gates Foundation has also been instrumental in funding both policy interventions and scientific projects particularly on indigenous crops. Regional Economic Communities (RECs) are developing biosafety policies to apply blanket-fashion to all member states, reducing case-by-case risk assessment and promoting cheap and easy regional trade of GM seeds and commodities. USAID has laid an intricate web of partnerships with corporations, key political bodies, national agricultural research institutions, academia, CGIAR institutions and NGOs in a long-term multi-pronged strategy to promote GMOs in Africa.

On the horizon are GM indigenous/traditional crops, the research and development of which have been strong tool to train local scientists, develop risk assessment and other regulatory procedures and win over lobbying power in scientific and government circles (e.g. cowpea, pigeon pea, sorghum, cassava, banana). Particularly worrying is the move from commodities to food security crops, often “women’s crops”, shifting ownership to private hands. This push goes hand in hand with the new seed laws.

There has also been a concerted push for GM cotton. African cotton growers and industry have become allies, calling for weak biosafety regimes and speedy introduction of GM cotton to boost productivity and increase global competitiveness. Another project is the Gates Foundation-funded Water Efficient Maize for Africa (WEMA), to introduce Monsanto’s drought tolerant maize (coupled with the Bt trait) and touted as “climate smart agriculture”.

In conclusion, this new occupation of Africa is not only of physical space, but also of institutional space and assets. The means are through altering seed systems and agricultural

techniques, directing public resources to supporting privatised profit, and the advancement of some at the expense of others (e.g. land dispossession).

However, there is a growing movement and resistance to the Green Revolution and GM push in Africa. The alternatives are based on common, democratic ownership of resources and technologies, and cooperation in economic activity.

2. The GMO Agenda in Malawi

Bright Phiri, Commons for Ecojustice, Malawi

Last year, Monsanto submitted an application to the Malawian authorities for commercial Bt cotton production in the country. This is the first commercial application for GM crops in Southern Africa, apart from South Africa where GM crops have been cultivated since 1997.

Monsanto applied for general release of insect-resistant Bt cotton Bollgard II. In accordance with national law, a public notice was placed in national newspapers, but the email address provided, to which submissions could be sent, was wrong, which compromised the purpose of soliciting comments from the public. Civil society organizations (CSOs) in Malawi lodged a challenge to vacate the public notice.

The Government allowed an extension of time for submissions of comments, and a CSO alliance met to understand the application, build consensus and develop a CSO position on the issue. The alliance submitted an objection to the application, which identified key concerns arising from the application and which was based on scientific, socio-economic, environmental and administrative justice grounds.

Among the key issues raised was the lack of a cost-benefit analysis on the impacts of Bt cotton cultivation on cotton farmers, and that important elements such as the potential development of secondary pests, examination of multiple exposure pathways, and development of pest resistance, were not dealt with substantially in the application. Furthermore, local field trial data from Bunda College of Agriculture were not accessible or placed in the public domain. The issue of liability and redress in case of damage was ignored, while there were no proposed safeguards for an important public-private partnership initiative in Malawi – Cotton made in Africa – which prohibits the use of GM cotton.

The CSO submission called for the Government of Malawi to dismiss the Monsanto application, and suspend and decommission the existing confined field trials of Bt cotton. The GMO-Free Malawi platform was established to resist the introduction of GMOs in Malawi and continues to do so.

The Malawi Government referred the Monsanto dossier to COMESA for expert advice. CSOs contested and applied for a complete cancellation of the application. This was done in December 2014 and Monsanto was ordered to make a fresh application due to the incomplete nature of its application, as well as to issue a fresh public notice.

A new public notice and a clarification from the office of the Registrar on Biosafety were issued on 4 May 2015. However, the non-confidential PDF version of the application has to date, not been placed in the public domain. Concerns have already been raised with the Government on the lack of access to public information.

3. West African biosafety framework and Bt cotton failure in Burkina Faso

Mamadou Goita, Coalition pour la Protection du Patrimoine Génétique Africain (COPAGEN), Mali

COPAGEN is a regional coalition that works in nine countries in West Africa and comprises of organisations fighting GMOs and working on farmers' rights. The coalition was formed in 2004 with two key pillars – no GMOs in our region, and for working on seed, land and water issues. From 2004-2005/6 we have been investigating the creation of AGRA in Africa, which we perceive as a way of introducing GM seeds. COPAGEN is also a member of the Alliance for Food Sovereignty in Africa (AFSA), which is a pan-African network.

Burkina Faso was the first country in West Africa to conduct GM cotton trials. Unfortunately, companies like Monsanto and Syngenta have been able to interfere with institutions in the country and use the government space to achieve their agenda. Their strategy was to use the weakest countries to start something on GM production. Bt cotton in Burkina Faso is also a regional issue. Via the ECOWAS process, which COPAGEN resisted, a regional policy that would bind countries to grow GMOs, was proposed. In 2008, COPAGEN organised a caravan in all the nine countries to raise awareness and mobilise opposition to GM crops.

In a research project facilitated by COPAGEN, farmers together with researchers have conducted research on the scientific and socio-economic issues related to Bt cotton. Last year, there was a controversial assessment of the 5 years of Bt cotton cultivation in Burkina Faso, with 2 years of confined field trials, which said that Bt cotton has been a total failure, because those growing the crop have been using a lot of pesticides and herbicides. This has incurred extra expenses for production. The research confirms our own preliminary results. A key factor was that the Bt cotton seeds were given for free to farmers at the beginning, but now costs have gone up and this is impacting farmers' incomes.

4. Bt cowpea in West Africa and Malawi

Bern Guri Centre for Indigenous Knowledge and Organizational Development (CIKOD), Ghana and Bright Phiri, Commons for EcoJustice, Malawi

It is important to first understand the value of seed for Africans. When we talk about seed in Africa, it is much more than from an economic perspective as there are cultural and spiritual values as well. Seeds are important for ritual ceremonies and social activities in our communities. GM seed is therefore a big threat and has potential adverse impacts. This is the basis on which farmers and communities are fighting GM crops.

Cowpea is a popular food in West Africa and is the most important protein source for many. Cowpea is grown very widely and the major challenge to crop cultivation is insect infestation. However, the right indigenous practices can reduce pest infestation.

Bt cowpea has been developed at the Savannah Research Institute in Ghana to control *Maruca* pests. They are projecting its potential commercial release in 2015.

Civil society in Ghana established a platform to resist GMOs, and informed traditional leaders, who came out strongly against GM crops. The Speaker of Parliament had to postpone the biosafety law twice. Civil society groups took the Government to court and the bill has been suspended for now.

In Malawi, there has been an application by Bunda College of Agriculture for confined field trials of Bt cowpea. Cowpeas are an important source of proteins, are grown in marginal regions, and are the staple food of many. Cowpea is the first crop to be harvested during the hunger months so plays a critical role in providing food security.

Civil society groups immediately engaged with the application and submitted an objection to the government. The concerns raised are themselves tied to the application and the quality of data presented. The objective of the confined field trials was to demonstrate substantial equivalence of Bt cowpea, but this is not reflected in the design of the trials. There is a lack of basic parameters, with no consideration is given to the issues of impacts on non-target organisms and of secondary pests. Nothing is mentioned about beneficial insects that could be affected by the Bt cowpea.

Furthermore, cowpea is grown from local farm-saved varieties, so there needs to be questions asked about the socio-economic impacts and the implications of seed exchange on gene flow. Cowpea is a so-called women's crop – what would be the impacts on women? Cowpea is also grown in neighbouring countries with possible implications beyond Malawi's borders. These issues are not considered at all in the application.

5. GMO food fight in Kenya

Daniel Maingi, Growth Partners Africa, Kenya

The issue of GMOs has been very controversial in Kenya. In 2012, the Kenyan Cabinet placed a ban on the import of all GM foods into Kenya, due to evidence that GMOs are not safe. This is still in effect up to today. Kenya has a Biosafety Act that is largely industry friendly, but it still contains some good provisions. There is also an active civil society campaign on GMOs, run by the Kenyan Biodiversity Coalition.

Scientists from local institutions including ISAAA have put in resources to organise push back on the GM food import ban. Last year, Unilever took the National Biosafety Authority (NBA) to court because the NBA had found that one of their spices contained a GMO that was not approved and products were removed from the market.

Kenya was supposed to commercialise Bt cotton in 2014, but this has not happened. Industry-sponsored farmers have petitioned the President to lift the GM food import ban. If the ban is not lifted, industry says it won't commercialise Bt cotton in Kenya.

Local scientists are thus now looking for public genes that would confer the same traits. The research has expanded to other crops and methodologies. Mechanisms are being put into place to replace indigenous crops. For example, getting farmers used to farming with fertilisers and pesticides.

6. The Gates Foundation and Monsanto's Water Efficient Maize

Sabrina Nafisa, African Centre for Biodiversity (ACB), Tanzania

Climate change will affect agriculture and smallholder farmers in Africa. In response, there has been promotion of projects under the 'climate-smart agriculture' rubric. The 'Water Efficient Maize for Africa' (WEMA) project is touted as a model – it is a public-private partnership financed by the Gates Foundation. A joint collaboration involving CIMMYT, national agriculture research organisations in five countries and Monsanto, WEMA's goal is to produce drought-tolerant maize using conventional breeding and genetic engineering. The African Agricultural Technology Foundation (AATF) is the main implementing agency. So far, USD 85 million has been pumped into the project. The 'Drought-Tolerant Maize for Africa' (DTMA) project, which focuses on conventional breeding, is also funded by the Gates Foundation.

The drought-tolerant gene from Monsanto in event MON 87460 that is used in the WEMA drought-tolerant maize contains a bacterial cold-shock gene. It was approved for environmental release in the United States in 2011. It claims to offer a reduction in yield loss of only around 6%, which is unlikely to have any benefit under extreme drought conditions.

South Africa conducted the first trials on the drought-tolerant maize in 2007. In 2014, Monsanto submitted an application for full environmental release, which is currently under review. Field trials were conducted in Kenya and Uganda in late 2010. Mock field trials were also conducted in Tanzania in 2009 and Mozambique 2010; there are no trials there, ostensibly due to the strict liability clause in their laws. There is enormous pressure on these countries to amend their laws in favour of GM crops. In Tanzania, the amendments have now been taken to the Attorney-General's Chambers, while in Mozambique, the African Network of Biosafety Experts (ABNE) – funded by the Gates Foundation – reviewed the law and amended the strict liability clause.

Monsanto has also said that it would donate the Bt event MON 810 to the WEMA project. The first field trials for MON 810 were carried out in Kenya in 2010. In Uganda, field trials were conducted in 2013. However, MON 810 has been withdrawn from the South African seed market, as pest resistance is a problem, and it has now been replaced with a stacked gene crop. Why then is it being introduced via the WEMA project?

In conclusion, WEMA is really about the introduction of other GMOs into the continent and about weakening biosafety legislation in Africa.

7. GM bananas in Uganda

Bridget Mugambe, Alliance for Food Sovereignty in Africa (AFSA), Uganda

AFSA has taken up the issues of land grabs and impacts on food sovereignty; seed laws and harmonization; making the case for agroecology in Africa; and the GMO push. So far, GMOs have been resisted on the continent. There are commercial GM crops i.e. cotton, but now attention has turned onto the African food crops – cowpeas, maize and banana.

There has been a big push on the GM banana, particularly in Uganda. Banana is the staple food in Uganda. Human trials of the GM banana in the US have been proposed. There are many field trials on-going, with the main traits being GM bananas resistant to bacterial wilt and those containing Vitamin A.

For us, it is not just an issue of food, but also about what this means for our culture, communities, etc. We are asking about the relevance of the GM banana to us – what are the impacts of the genetic modification on taste, colour and water composition? How will it be cooked and consumed? We know that there are other readily available sources of Vitamin A in Uganda, so it is obvious that GM banana is not the solution. There are also issues of concern around the risk assessment and safety of the GM bananas. The human trials in the US have been halted for now and there are many questions around it.

8. Discussion points

- How do we deal with the messaging from the industry, about how Africa is in a dire state, dying from hunger and GM crops are needed to feed them. How can we respond to this false message?
- Africa is not dying of hunger. We have high production of cereals and legumes. It is not a problem of production, in fact there is 27% excess production in West Africa. There are many different varieties of seeds, that we could increase the yields of, and by fighting pests etc. naturally we can grow 30-40% of yields. There are structural problems to address, where we need to get food where we need it. We need to reverse the roles of governments and companies. Our government has become the market and the market has become our policy makers.
- In the Malawi context, we have one region with three districts that do not consume maize, which is the national staple. They only consume sorghum and millet. They are better off than the people fed with maize. Improved seed has been marketed extensively for 30 years, but adoption remains at 40% because people are resisting. There are three cases where communities rose up to dismantle the GM field trials.
- African governments are changing their position on GMOs at the international level. We see the private sector taking over the public space and philanthrocapitalists like

the Gates Foundation influencing through their funding. It is a really fragile situation, including in the UN Cartagena Protocol on Biosafety negotiations, although we are encouraged by the resistance on the ground.

- Part of this problem is because the EU has withdrawn from the biosafety arena and has left a vacuum that has been filled by USAID and the like. How can we, as EU citizens, make our governments accountable?
- We in Africa need your support for the lack of unified positions in the Cartagena Protocol negotiations. Africans are funded by industry to go to the negotiations and to develop positions.

- As Africans, food is not just about eating. There are of course challenges for food and agriculture in Africa. Our message has to be, are we advancing the right solutions?
- We need to build up from the current situation of farmers. Farmers want to keep their seeds and practices. We have to work on agroecology, so that farmers don't lose power over their seed.
- All is not lost, there is a huge variety of indigenous crops in Africa. In Kenya, the pressure is great but the government still maintains the GM food import ban. We need to have multifaceted ways of looking at the issue and to keep resisting.
- We have the diversity of our networks, strength and resilience. We have had 17 years of experience in South Africa on GM crops. All the concerns we have raised have come to pass – there has been a dismal failure of GM crops with regard to smallholders. Africa's backbone is agriculture and smallholder farmers. We need to tie up with agroecology and defence of peasant agriculture.