Will trade barriers prevent the adoption of genetically modified crops in Africa?

John Komen and David Wafula

Susan Beccio/IFAD

Concerns over export markets are often cited in Sub-Saharan Africa as a reason for taking a precautionary approach to the adoption of genetically modified (GM) crops. In some countries, this is exacerbated by trade restrictions on GM commodity imports, thereby having a negative impact on food security in times of production shortfalls or famine. Trade-related effects and access to export markets are often emerging as a concern since developments in

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potential markets such as those in the European Union (EU), where the level of caution around modern biotechnology and consumer skepticism are still high, have attracted attention. More specifically, several African policy makers have been preoccupied with the notion that the adoption of GM crops would attract a wholesale rejection of agricultural exports by trade partners.

While we recognize that decisions around the adoption of GM crops in Africa are often surrounded by controversy, the present essay provides insights on key trade aspects of GM adoption based on recent research.

GM commodities are widely accepted in international trade

Almost 20 years after their introduction, and despite well-publicized opposition in some countries, the four main GM products – maize, soybeans, cotton and canola – are widely traded and consumed internationally, as the largest agricultural exporting countries are the largest GM crop adopters. For instance Brazil, which has high GM adoption rates for soybeans, maize and cotton production, has benefited from strong increases in the yield and export values of those crops. Closer to home, South Africa's maize exports (including white and yellow maize), of which around 80 per cent is GM, have readily found their way into export markets including many countries in Sub-Saharan Africa. In Burkina Faso, another GM adopting country, cotton production and exports soared in recent years due to the rapid adoption of GM cotton (currently more than 50 per cent of total acreage). Prior to approving commercial production of a GM crop, those agricultural exporting countries carefully assess the likely impact on export markets. In a very few cases, this has resulted in delayed or rejected GM releases due to trade considerations; for example, for GM insect-

resistant potato in South Africa, which is traded with neighbouring countries like Mozambique and Zimbabwe.

Genetic modification and the European Union

Contrary to popular belief, countries in the EU are not against GM products, nor are they "GM free", though they do have elaborate and stringent regulations. While the cultivation of GM crops is limited to insect-resistant maize, which is predominantly planted in Spain, the EU has approved a wide range of GM products for direct consumption by humans and animals despite a lengthy and unwieldy approval procedure. This includes GM soybeans, cotton, maize, oilseed rape and sugar beet. Consequently, the EU trading bloc imports massive quantities of GM commodities mainly for use as animal feed. About 70 per cent of soybean meal consumed in the EU is imported and 80 per cent of this meal is produced from GM soybeans. On average, EU imports of soybean meal and soybeans amount to US$ 9 billion and US$ 6.5 billion per year, respectively. Although it has to comply with very strict labelling rules, and long-drawn-out decision-making procedures, trade involving GM products with EU countries has clearly not been deterred. In addition, nine EU member countries continue to conduct experimental field trials on a range of GM crops with improved agronomic traits, contributing to an ever increasing pipeline of GM crop cultivation proposals under consideration by EU authorities.

Trade concerns: analysis from East Africa

While commercial adoption of GM crops is lagging in Sub-Saharan Africa, a steadily increasing number of GM food crops are being tested in various countries. A

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previous, detailed analysis in East Africa (Komen and Wafula, 2013) concludes that the degree of trade risk associated with the prospective commercial adoption of GM crops such as maize, cassava, cotton and bananas – which are among those currently being tested in confined field trials in Kenya and Uganda – is first and foremost an intraregional issue and poses little cause for concern. First, as argued above, various GM varieties of maize and cotton are traded worldwide and are generally accepted for processing as food, feed and fibre. Moreover, the value and volume of exports to GM-sensitive destinations, such as the EU, are very small and in most cases negligible.

The trade analysis points to a high concentration of agricultural trade (exports as well as imports) within the East African region and the rest of Sub-Saharan Africa. Clearly, agricultural trade involving GM crops can be addressed early enough by regional regulatory dialogues and by accelerating the processes of developing common, Pan-African biosafety policies, in order to mitigate any market access bottlenecks. Given that the regional integration initiatives in Africa pay much attention to trade in key agricultural commodities and the need to minimise tariff and non-tariff barriers, matters concerning decision making on GM crops can be adequately mainstreamed into the regional integration policies and instruments.

It is essential for countries to establish their own policies on modern biotechnology and biosafety, and on associated regulatory frameworks.

International agreements, decision making and regional collaboration

An often heard argument in regional discussions on biotechnology and trade is that the capacity of individual countries in handling and regulating GM products widely differ, and that some may not be ready to take decisions on releases and trade.

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However, as national regulatory frameworks governing modern biotechnology are still evolving, international agreements such as the Cartagena Protocol on Biosafety (CPB) and agreements under the World Trade Organization are practical starting points for countries considering adoption of GM crops and their likely trade impacts. These treaties provide internationally accepted guidelines and procedures regulating trade in agricultural commodities involving GMOs. International instruments can be used as an interim measure by importing countries that do not yet have a fully functional national regulatory framework. A case in point includes Annex III of the CPB dealing with *Risk Assessment of GMOs*, which can be used in domestic decision making. International agreements encourage information exchange, regional collaboration and harmonisation between signatory countries on the basis of internationally accepted scientific standards and are therefore a cornerstone for any regional harmonisation efforts.

Clear and workable policies are essential

While international agreements and standards may provide important guidance, and could be used on an interim basis, it is essential for countries to establish their own policies on modern biotechnology and biosafety, and associated regulatory frameworks. Clear policy goals and regulations have proven to facilitate informed decision making on GM adoption and trade. Where adopted, the national biotechnology policies of Sub-Saharan African countries generally contain policy statements that recognize the potential and contribution of modern biotechnology in meeting socio-economic development goals. In contrast, in many cases, their biosafety regulations have unduly stringent provisions that will undermine efforts to meet broader national food

security and developmental goals. In addition, they hinder efforts towards regional integration and trade agreements to which they have subscribed in regional bodies. The discrepancy between national biotechnology policies and biosafety laws and regulations is a crucial agenda item that needs to be addressed as a matter of urgency.

Concluding note

In September 2013, the Fifth COMESA (Common Market for Eastern and Southern Africa) Joint Meeting of the Ministers of Agriculture, Environment and Natural Resources endorsed a proposed common COMESA Policy on Biotechnology and Biosafety for adoption, taking into account the sovereign right of each member state. In addition, the meeting called to support member states to implement the policy through communications and outreach, development of operational guidelines and establishment of regional biosafety risk assessment structures. When operational, the COMESA policy will provide a common decision-making framework for trade in GM crops between member states. Such bold decisions are critical to allay any remaining fears over trade barriers and boost intra-regional trade.

Further reading

ASSAF (2012) *Regulation of Agricultural GM Technology in Africa: Mobilising Science and Science Academies for Policymaking.* Academy of Science of South Africa: Pretoria.

Komen, J., Wafula, D. (2013) *Trade and Tribulations: An Evaluation of Trade Barriers to the Adoption of Genetically Modified Crops in the East African Community.* Center for Strategic and International Studies: Washington DC. Rowman & Littlefield Publishers Inc; Lanham, Boulder, New York, Toronto, Plymouth UK.

David Wafula *recently joined the East African Community (EAC) and is the former Kenya Coordinator of the Program for Biosafety Systems (PBS). His professional interests are in the areas of agricultural biotechnology, biosafety, trade, food security, biosafety communication and regional harmonisation. He has authored and co-authored over 20 peer-reviewed publications and journal articles on these issues.* dwafula@eachq.org

John Komen *works as an independent advisor to research and regulatory organisations around the world on matters of biotechnology policy, biosafety regulation and research programme management. Since the launch of the USAID supported Program for Biosafety Systems (PBS) in 2003, John has served as PBS Assistant Director, with specific responsibility for coordinating the planning and implementation of technical assistance activities with partner countries in Africa.* jce.komen@planet.nl