

What can African countries learn from the changing EU and Chinese regulations on GE crops?

One of the subjects we touched on last year was around the apparent change in sentiment about genetically engineered (GE) crops within the European Union (EU). The region has long restricted the importation and cultivation of GE crops, but in 2022, it approved certain varieties of maize, soybeans and rapeseed. Still, these had not gone through the authorization stages that would open the door for trade in the approved varieties. It was only on 22 February 2023 that the EU authorized imports of certain types of GE soybeans¹ and rapeseed² for use in food and animal feed for a period of 10 years. Still, this authorization does not include cultivation. These will mainly be imports, all subject to the EU's labelling and traceability rules. After roughly a quarter of a century of opposition to GE crops, this perhaps signals a move to wider future acceptance of the technology within the EU. This change in sentiment is probably underpinned by a growing desire for nations and regions to improve their food security conditions after the Russia-Ukraine war caused notable disruption in global grain and oilseed supplies.

Notably, the EU is not alone in the change of sentiments about GE crops. Last year, the Chinese National Crop Variety Approval Committee released two standards that cleared the path for cultivating GE crops in the country. This has been the missing piece in the regulations for China's commercial growth of GE maize and soybeans. The government has two steps in these regulations. These are a "safety certificate" and a "variety approval" before crops can be commercially cultivated. Various GE maize and soybean varieties have received the safety certificate since 2019. What has been missing has been the "variety approval". Now that the hurdle has been cleared, commercialization of GE crops in China is a real possibility.

Unlike the EU, China currently imports GE maize and soybean but prohibits domestic cultivation of the crops. The regulation change to encourage domestic cultivation would potentially lead to improved yields. Such improvement would align with China's ambition of becoming self-sufficient in essential grains and oilseeds in the coming years. There are specific targets for products like pork, for which the country wants to produce 95% of its consumption by 2025.

Implications for Africa

African countries should pay close attention to this wave of change in sentiment in key economic regions. Some African countries arguably closely followed the EU's approach to GE crops by prohibiting their imports and cultivation. With this new development in the EU and the authorization process completed, it is plausible that some African countries might consider evaluating their current restrictions, especially for vital staple grains such as maize. Kenya is one such country which seeks to clear white maize cultivation. But in February 2023, lobby groups took legal action to block GE white maize seeds planned for release to farmers by the Kenya Agricultural and Livestock Research Organisation (KALRO) in March and April 2023.³

¹ More information is available [here](#).

² More information can be accessed [here](#).

³ More information is available [here](#).

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As we have argued several times, Kenya is one of the African countries that could benefit from GE seed cultivation as a major consumer of maize. Recently, Kenya has struggled with poor maize yields because of unfavourable weather conditions and crop disease. Kenya's 2022/23 maize import forecast is 700 000 tonnes. Yet, Kenyan consumers cannot access the abundant GE maize in the world market, let alone utilize crop technologies to reduce crop losses. With a change in regulations, Kenya would have been able to access more affordable maize from the likes of South Africa, the US and South American countries, directly benefiting consumers and supporting the struggling animal sector. The typical major suppliers of non-GE maize to Kenya have been Tanzania, Mexico and small volumes from Zambia and South Africa. Mexico has been importing large volumes of maize from the world market and even South Africa, so the country may not have large supplies for the export market.

Considering the global grains market changes, the most critical step in GE regulations, particularly in Africa, would be permitting cultivation. Of course, this typically introduces debates about the ownership of seeds and how smallholder farmers could struggle to obtain seeds and support inputs in some developing countries. These are realities that policymakers in African countries should manage regarding reaching agreements with seed breeders and technology developers but not close off innovation, as is currently the case. Technology developers also need to be mindful of these concerns when engaging various governments in African countries. This discussion should occur even sooner in Africa, as the geopolitical and climate change risks present the urgency to explore technological solutions to increase each country's agricultural production.

The only country that is an anomaly in Africa is South Africa, which began planting genetically engineered maize seeds in the 2001/02 season. Before its introduction, average maize yields were around 2,4 tonnes per hectare. This has now increased to an average of an expected 6,1 tonnes per hectare in the current production season of 2022/23. Meanwhile, the sub-Saharan African maize yields remain low, averaging below 2.0 tonnes per hectare. While yields are also influenced by improved germplasm (enabled by non-genetically modified biotechnology) and enhanced low and no-till production methods (facilitated through herbicide-tolerant GM technology), other benefits of GE crop technology include labour savings and reduced insecticide use as well as enhanced weed and pest control.⁴

Overall, with the African continent currently struggling to meet its annual food needs, using technology, genetically engineered/modified seeds, and other means should be an avenue to explore to boost production. The benefits of an increase in agricultural output are evident in Argentina, Brazil, the United States, and South Africa. The EU, which has arguably had a major influence on the general perception of GE crops in Africa, is changing its stance, at least on imports. This should serve as a signal to African countries. Still, their actions shouldn't aim to match that of the EU but go further and argue for access to these technologies to domestic farmers under fair agreements with the seed and technology developers, all of which can be negotiated at a country level.

⁴ More information about this issue is [here](#).