

Voluntary Report – Voluntary - Public Distribution

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Report Name: Nigeria Becomes Second African Country to Approve Biotech Corn for Commercial Planting

Country: Nigeria

Post: Lagos

Report Category: Agriculture in the News, Climate Change/Global Warming/Food Security, Grain and Feed, Biotechnology - Plants and Animals

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Report Highlights:

In January 2024, Nigeria approved the commercial release of four TELA maize varieties, which have been genetically engineered for improved insect-resistance and drought-tolerance. In addition to South Africa, Nigeria has become the second country in Africa to approve the commercialization of genetically engineered corn. In marketing year 2022/2023, Nigeria produced an estimated 12.7 million metric tons (MMT) of corn, with an average yield of 2.2 tons per hectare. According to the African Agriculture Technology Foundation (AATF), yields of TELA maize could reach up to 10 tons per hectare if grown under good agronomic practices.

Nigeria Commercializes TELA Maize Varieties

On January 11, Nigeria's National Committee on Naming, Registration and Release of Crop Varieties, Livestock Breeds/Fisheries announced the [approval of twenty-three new varieties](#) for commercial planting, including four biotech TELA maize varieties. This approval implies that seed companies can license rights to produce and commercialize the new TELA hybrids under their private brand from AATF. [According to AATF](#), the varieties are owned by the respective institutions that developed them including the national government research organizations, and they will be licensed to local seed companies royalty-free through the AATF. The TELA Maize Project was originally known as the Water Efficient Maize for Africa Project. Nigeria first joined the TELA Maize Project in 2019.

In October 2021, the National Biosafety Management Agency (NBMA) granted approval for the environmental release and field trials of TELA maize varieties SAMMAZ 72T, SAMMAZ 73T, SAMMAZ 74T, and SAMMAZ 75T. Nigeria's Institute for Agricultural Research carried out national performance trials of the four varieties across ten states with varied agroecological conditions. The trials reportedly showed average yields achieving 3 tons per hectare.

Potential TELA Maize Advantages and Challenges

In 2016, outbreaks of fall armyworm were first detected in Nigeria, and quickly spread to other areas in West Africa and the continent. According to several studies, fall armyworm (FAW) can reduce corn production in affected areas by 20 to 50 percent, and raise production costs through increased labor and pesticide applications. [According to one study](#) published by Nigerian government authors, since 2016, the average loss in each Nigerian state affected by FAW in corn production averaged \$53 million. Compared to traditional hybrids, TELA maize could potentially reverse yield loss, reduce labor and input costs, and lower pesticide use (Figure 1). For comparison, [South Africa doubled corn yields](#) over the past 20 years, in part after adopting insect-resistant genetically engineered corn varieties following the approval of the "GMO" Act of 1997.



Figure 1. Traditional Nigerian maize hybrids affected by FAW (left) and TELA maize variety (right); grown on test plots in Nigeria. Source: FAS-Lagos

According to FAS-Lagos contacts, it is expected that the first batch of TELA maize planting seeds would be imported from South Africa. An estimated 95 percent of Nigeria’s seed companies cannot produce hybrid seeds; contacts anticipate it will take time to domestically produce TELA maize planting seeds. Contacts noted that additional outreach and trainings will need to be conducted with seed companies, distributors, and farming groups. Farmers will also need to be exposed to planting improved hybrid seeds rather than open pollinated varieties (OPVs). [According to GGIAR](#), more than half of Nigeria’s corn production utilizes OPVs over hybrids, with OPVs reaching 70 percent in dry savanna regions. In marketing year 2022/2023, Nigeria [produced an estimated 12.7 million metric tons \(MMT\) of corn](#), with an average yield of 2.2 tons per hectare. [According to the African Agriculture Technology Foundation \(AATF\)](#), yields of TELA maize could reach up to 10 tons per hectare if grown under good agronomic practices.

Attachments:

No Attachments.