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Ethiopia

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Ethiopia Moves Closer to Commercializing Bt Cotton

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Report Highlights:

Ethiopia completed its second round of Bt cotton confined field trials in 2017 and commercialization is expected within the next couple of years. The introduction of this enhanced cotton variety is expected to contribute to greater levels of cotton production that are needed to satisfy the demand of the Ethiopia's growing textile and apparel sector.

SECTION I: EXECUTIVE SUMMARY

Ethiopia's economy has experienced significant growth for more than a decade. Agriculture is at the heart of the economy, accounting for about 40 percent of the country's GDP and employing 85 million of the country's nearly 100 million inhabitants. Future economic growth is expected to hinge heavily on the country's manufacturing sector, especially the agro-processing, textile and apparel, and leather industries, among others.

With regards to the expanding textile and apparel sector, the Government of Ethiopia (GOE) for the last several years has been taking measured but deliberate steps to increase domestic cotton production by implementing the necessary legal and regulatory frameworks to facilitate the adoption of GE cotton. The GOE, alongside international partners, have allocated resources to strengthen the country's technical capacity to manage the technology.

As it stands now, the earlier version of the Biosafety Proclamation, which was unworkable, has been revised to support the adoption of the technology. The second round of Bt cotton confined field trials (CFTs) was completed this year and commercialization could occur within the next couple of years. At the same time, the government has organized a Biotechnology Council and Biotech Institute to coordinate biotech policy and research, respectively, across the broader GOE. Looking ahead, the country's experience with Bt cotton is critical as it will determine whether the country introduces the technology in other crops.

SECTION II: PLANT AND ANIMAL BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE

a) **PRODUCT DEVELOPMENT:** Following the amendment to the country's Biosafety Proclamation, which was signed into law in August 2015, the Ministry of Agriculture (MoA) has completed its second round of CFTs for Bt cotton in several locations across the country. Commercialization could occur within the next couple of years. In addition, MOA is looking at the possibility of introducing drought and pest-resistant maize, disease-resistant potatoes, as well as a couple other GE crops in the coming years.

b) **COMMERCIAL PRODUCTION:** There is currently no commercial production of GE crops in Ethiopia. Assuming it is commercialized, GE cotton will likely first be grown on large commercial cotton farms. Afterward, small-holder farms are also expected to gradually adopt the technology.

c) **EXPORTS:** Ethiopia does not export GE crops.

d) **IMPORTS:** There are currently no imports of GE grains or oilseeds. However, Ethiopia does import processed agricultural products such as soybean and corn oils, as well as breakfast cereals made from

GE ingredients. With respect to non-food products, Ethiopia imports GE cotton from the India and the United States. Information on the Ethiopia's cotton situation can be found in our GAIN report, [ET1613](#).

e) **FOOD AID:** Ethiopia remains one of the largest recipient countries of U.S. food aid. U.S. food aid commodities made from GE products, such as corn-soya blend (CSB), are allowed under a waiver.

f) **TRADE BARRIERS:** The approval process for imports of GE grains and oilseeds for food and feed appears overly burdensome. At present, no GE grain or oilseed has been approved for import, nor has access been requested.

PART B: POLICY

a) **REGULATORY FRAMEWORK:** The Ministry of Environment & Forest (MEF) is the designated competent authority within the Government of Ethiopia (GOE) that is responsible for the Biosafety Proclamation, which is the overarching legislation governing the use of the technology. The Ethiopian Institute for Agricultural Research (EIAR), which is housed under the Ministry of Agriculture (MOA), provides technical expertise to support the research and development of the technology, safety assessments and field trials, as well as enforcing the provisions within the Proclamation and its subordinate implementing regulations. The Ministry of Science and Technology (MOST), the Ministry of Livestock & Fisheries, and the Ministry of Industry (MOI) also play a role in shaping the country's biotech regulatory framework.

In August 2015, the President of Ethiopia signed into law an amendment to the biosafety proclamation that establishes the legal framework governing the use of the technology. The government subsequently revised the proclamation's underlying implementing directives to spell out specific requirements regarding the research and application of the technology, but these regulations are not yet publicly available. These legal changes were in large part precipitated by a strong political push from the top based on the expectation that biotech cotton, particularly Bt cotton, would boost local production to satisfy the expected demands from the growing textile and apparel industry. Information on the Ethiopia's cotton situation can be found in our GAIN report, [ET1613](#).

In June 2016, the Parliament passed a proclamation establishing the Biotechnology Council and Biotech Institute to coordinate biotech policy and research, respectively, across the broader GOE. The Biotech Institute is already established and operational, but is seeking to staff up personnel. Meantime, the Biotechnology Council has convened several times under the direction of the Deputy Prime Minister.

b) **APPROVALS:** In 2016, at the MOA's request, the Ministry of Environment & Forest approved the importation of Bt cotton seed for field trial testing and research. In 2017, the MOA completed its second round of Bt cotton field trials and commercialization is expected within the next couple of years.

c) **STACKED or PYRAMIDED EVENT APPROVALS:** It is unclear whether the yet-to-be-published directives contain provisions regulating stacked event approvals.

d) **FIELD TESTING:** The second round of confined field trials of Bt cotton was recently completed at several sites in the cotton-growing areas of the country. Follow on testing and analysis is expected. The

Biosafety Proclamation's implementing directives outline the regulatory parameters for conducting field testing.

e) INNOVATIVE BIOTECHNOLOGIES: Ethiopia considers tissue culture and molecular characterization under its broad definition of biotechnology. For more information, please refer to [the Ethiopian Institute of Ag Research list of biotech-related research activities](#).

f) COEXISTENCE: N/A

g) LABELING: Foods containing GE ingredients must carry a label with the following statement: 'genetically modified food'. The purpose of this statement is to inform consumers of the content of the product. The GOE does not have sufficient capacity to enforce this labeling requirement. For more details on labeling, please refer to GAIN [ET1707](#).

h) MONITORING AND TESTING: While the capacity exists, Ethiopia does not have uniform monitoring and testing mechanisms to detect GE products.

i) LOW LEVEL PRESENCE (LLP) POLICY: N/A

j) ADDITIONAL REGULATORY REQUIREMENTS: N/A

k) INTELLECTUAL PROPERTY RIGHTS (IPR): Ethiopia has yet to sign a number of major international intellectual property rights (IPR) treaties. As a consequence, IPR protection of commercially-planted GE crops is uncertain.

l) CARTAGENA PROTOCOL RATIFICATION: Ethiopia is a party to the Cartagena Protocol on Biosafety (CPB). According to their most recent submission (2016) to the CPB secretariat, the country has a regulatory framework, which is underpinned by the newly-revised Biosafety Proclamation and implementing directives, in place to implement the protocol.

m) INTERNATIONAL TREATIES/FORA: In years past, Ethiopia was at the vanguard of the anti-GE movement in Africa and, to a certain extent, set the tone for the rest of the continent. In fact, while working with the African Union Commission, Ethiopia helped pen the restrictive Africa Model Law which has contributed to the delayed adoption of the technology on the continent. However, Ethiopia now appears to have broken from its past and is looking to embrace the technology, though only in a limited and controlled fashion as they are only looking to initially allow GE cotton. This paradigm shift, however, has not resulted in changes to the Africa Model Law, nor does the GOE appear to be actively promoting the technology in international fora, such as Codex.

n) RELATED ISSUES: N/A

PART C: MARKETING

a) PUBLIC/PRIVATE OPINIONS: There are no known active campaigns to dissuade or scare consumers from eating food products containing GE ingredients. This is in part because there is little consumer awareness of this technology combined with the fact that there are so few foods in the

marketplace that are made from GE crops. That said, leading up to Parliament's ratification of the newly-revised Biosafety Proclamation in August of 2015, there were efforts within the activist community to discourage the GOE from moving ahead with the new legislation. These groups cited concerns that the introduction of the technology, even GE cotton, would cause Ethiopia to sacrifice its rich biodiversity and cause irreparable damage to the environment. These claims continue to receive periodic coverage by the local press.

At the same time, the GOE and other proponents of the technology have also raised their voices to dispel these rumors and to promote the introduction of the technology. These opinions and views as well receive periodic coverage in the local press.

b) MARKET ACCEPTANCE/STUDIES: In light of the country's historic counter-stance against the technology, pressures from the anti-GE community, and perceived consumer concern, the GOE is only looking to initially commercialize GE cotton. If Bt cotton is commercialized, and depending on a favorable response from farmers and consumers, Ethiopia is expected to move ahead with introducing other GE crops, such as drought and disease-resistant maize.

CHAPTER 2: ANIMAL BIOTECHNOLOGY

PART D: PRODUCTION AND TRADE

a) PRODUCT DEVELOPMENT: There are no current plans to develop genetically engineered or cloned animals.

b) COMMERCIAL PRODUCTION: N/A

c) EXPORTS: N/A

d) IMPORTS: N/A

e) TRADE BARRIERS: N/A

PART E: POLICY

a) REGULATORY FRAMEWORK: No clear regulatory framework exists to govern the use of animal-related biotechnology. The current regulations appear to primarily deal with plant-based biotechnologies.

b) INNOVATIVE BIOTECHNOLOGIES: Under Ethiopia's definition of biotechnology, there is research and work being done in the areas of embryo transfer, reproductive synchronization, and sexed cattle semen. For more information, please refer to [the Ethiopian Institute of Ag Research list of biotech-related research activities](#).

c) LABELING AND TRACEABILITY: N/A

d) INTELLECTUAL PROPERTY RIGHTS (IPR): Refer to corresponding section in plant biotechnology section.

e) INTERNATIONAL TREATIES and FORUMS: Refer to corresponding section in plant biotechnology section.

f) RELATED ISSUES: N/A

PART F: MARKETING

a) PUBLIC/PRIVATE OPINIONS: Public awareness of biotechnology is limited. Nonetheless, the public is thought to be generally less supportive of animal biotechnology applications compared to those of plant biotechnology.

b) MARKET ACCEPTANCE/STUDIES: N/A