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Agricultural Biotechnology in Mozambique

Report Categories:
Biotechnology and Other New Production Technologies

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Report Highlights:
Mozambique is currently in the process to approve its revised Biosafety regulations. If approved, the new regulations will create a positive environment for seed companies to partner with the Mozambique government. This could allow for the planting of field trials of genetically engineered (GE) crops for the first time in Mozambique.

SECTION I: EXECUTIVE SUMMARY

Mozambique's agricultural sector is characterized mainly by subsistence farming. Over 80 percent of the total cultivated area is used for production of staple food crops for self-consumption, including cassava, corn, rice, sorghum and pulses. About 80 percent of the population (estimated at 23 million) is active in agriculture. Of this, only 10 percent is involved in commercial farming and the remaining 90 percent can be classified as subsistence farmers.

Mozambique's exports of agricultural, fish and forestry products to the United States were valued at US$13.3 million in 2012, a 28 percent increase from the previous year, due to an increase in the exports of cashew nuts and tobacco. Cashew nuts (US$11.3 million or 85 percent of total agricultural exports to the United States), tobacco (US$1.1 million), and tea (US$0.8 million) were the major items exported to the United States.

Imports from the United States of agricultural, fish and forestry products decreased by 31 percent, to US$50.7 million, in 2012. The decrease in imports from the United States was due primarily to a 56 percent decline in wheat imports. Wheat (US$28.0 million), soybean oil (US$11.4 million) and pulses (US$3.5 million) were the major products imported from the United States by Mozambique in 2012.

Mozambique has a Regulation on Biosafety related to the management of Genetically Modified Organisms (Decree no. 6/2007, of April 25th) currently in place. However, due to certain limitations in the regulations, the Minister of Science and Technology (MST) requested a complete review of the Decree. The review, which finished in December 2011, recommended complementing biosafety rules that will contribute to the establishment of an operational biosafety regulatory framework in Mozambique. Later in 2012, another review was done by the African Biosafety Network of Expertise (ABNE) to strengthen the liability and redress articles of the draft regulations. Expectations are that the revised Decree with complementary rules will be reviewed by MST and his legal team by mid November 2013. If approved by the MST, it will move forward for approval by the Council of Ministers for national consideration. This could allow for the planting of GE field trials for the first time in Mozambique.

SECTION II: PLANT AND ANIMAL BIOTECHNOLOGY

CHAPTER 1: PLANT BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE

(a) PRODUCT DEVELOPMENT

Currently, there is not any GE product development taking place in Mozambique. However, Mozambique is a partner country in the Water Efficient Maize for Africa (WEMA) project funded by the Gates and Buffett foundations. It is also foreseen that that BT cotton and drought tolerant corn field trials could start within the next two to three years once the Mozambique government finalizes the process of approving the proposed Biosafety Legislation.

(b) COMMERCIAL PRODUCTION

No commercial production of GE crops is currently taking place in Mozambique.

(c) EXPORTS

Mozambique is not exporting any GE crops.

(d) IMPORTS

Mozambique does allow for the imports of GE crops intended for direct use as food, feed or for processing but requires authorization from the National Biosafety Authority. The applicant has to submit a report on the risk assessment and management for human health and the environment, including, monitoring measures. The applicant may also be required to submit samples for testing purposes.

(e) FOOD AID RECIPIENT COUNTRY

The imports of GE products for food aid is generally authorized in emergency situations, but only for commodities destined for human consumption and only if there is no alternative solutions to respond to emergencies on a timely manner. The GE food grains imported need to be processed prior to distribution to the final recipients of food aid, in order to avoid utilization as seed. The import authorization granted is only valid while the emergency is still in effect.

PART B: POLICY

(a) REGULATORY FRAMEWORK

The government of Mozambique acknowledged the contribution that modern biotechnology can make to meet critical needs for food and nutritional security. At the same time, the government also recognized that the development of modern biotechnology needs to go hand-in-hand with appropriate regulations in order to maximize the benefits while minimizing potential risks.

It is within this context that the Parliament of Mozambique ratified the Cartagena Protocol on Biosafety in 2001(Resolution no. 11/2001, of December 20th) and created the inter-institutional National Biosafety Working Group (GIIBS - Grupo Inter-Institucional Sobre Bio-Segurança) to coordinate the process of developing National Biosafety Framework for Mozambique. The Ministry of Science and Technology was designated to serve as the National Biosafety Authority. This process culminated in development of the Draft National Biosafety Framework (NBF) published in 2005. The draft NBF was further refined through public consultation process that lead to development of consolidated document which served as basis for the Decree no. 6/2007, of April 25th, containing the Regulation on Biosafety related to Management Regulation.

The objective of the regulation was to establish domestic legislation aimed at regulating GE activities in Mozambique in order to contribute for adequate protection of the environment, biological diversity, and human health. The approval of Decree no. 6/2007 by the Council of Ministers constituted an important landmark towards establishment of enabling environment for safe and responsible application of modern biotechnology in Mozambique. However, Mozambique is still challenged with setting up a functional regulatory and institutional framework for the smooth implementation of the Decree.

In 2011, the Ministry of Science and Technology announced that Mozambique intends to revise its regulations on GE products in order to adapt the legislation to the country's current needs. Post was made aware by the Mozambique's Cotton Institute and private sector that companies are hesitant to assist in field trials due to gaps in the liability and redress articles in the Biosafety Regulations. The way the current proposed regulation is written liability for damages would be placed only on the private partner involved in field trials. This issue has caused multinational seed companies to be reluctant to conduct field trails and has stalled confined field trials of a drought-tolerant GE corn variety being developed under the WEMA project funded by the Gates and Buffett foundations.

Currently, GIIBS is tasked to co-ordinate biosafety activities in Mozambique. The Ministry of Science and Technology is the national competent authority and chair GIIBS. GIIBS consists of the representatives seven ministries, namely:

- Ministry of Science and Technology
- Ministry of Agriculture;
- Ministry for Coordination of Environmental Affairs;
- Ministry of Health
- Ministry of Industry and Trade;
- Ministry of Fisheries;
- Ministry of Planning and Development; and

The GIIBS meet on a quarterly basis and representatives from public and private entities and experts may be invited to the meetings of GIIBS.

The GIIBS is empowered:

- To advise the government in decision making on safe transfer, handling and use of GE products;
- To coordinate the development and updating of rules that adequately address the country's sustainable development objectives, consistent with the Cartagena Protocol on Biosafety;

- To produce periodical technical reports on the status of the biotechnology and biosafety in Mozambique;
- To ensure the exchange of biosafety information at the national, regional and international levels;
- To promote public awareness and education programs on biotechnology and biosafety at a national level;
- In collaboration with other relevant entities, to evaluate the biosafety component in the applications, proposals and projects related to activities involving GE, based on risk assessment reports, inputs from the public and any other socio-economic considerations;
- To establish technical and scientific requirements for GE development and trials;
- To promote short-, medium- and long term training programs on biotechnology and biosafety; and
- To ensure the monitoring and evaluation of the enforcement of the Regulation.

(b) APPROVALS

No plants or crops have been approved or registered in Mozambique for cultivation, imports or exports.

(c) FIELD TESTING

Mozambique's current Biosafety legislation does allow for field testing, but elements of the legislation require the technology provider to bear responsibility for any negative impacts. This has made it difficult to find a seed company to partner in BT cotton field trials. However, the latest draft regulation under review addresses this issue to fit with international standards.

(d) STACKED EVENT APPROVALS

The Mozambique's Biosafety Legislation does not indicate how it will handle stack events approvals.

(e) ADDITIONAL REQUIREMENTS

Not Applicable.

(f) COEXISTENCE

There is no specific guideline for coexistence and Mozambique does not have a national organic standard in place.

(g) LABELING

Currently, no compulsory labeling of GE products or food containing GE products is necessary.

(h) TRADE BARRIERS

There are no biotechnology related trade barriers that negatively affect U.S. exports to Mozambique.

(i) INTELECTUAL PROPERTY RIGHTS

Not Applicable.

(j) CARTAGENA PROTOCOL RATIFICATION

The Parliament of Mozambique ratified the Cartagena Protocol on Biosafety in 2001(Resolution no. 11/2001, of December 20th) and created GIIBS to co-ordinate biosafety activities in Mozambique.

(k) INTERNATIONAL TREATIE/FOR A

Mozambique is a signatory member of *inter alia*:

- The Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization (WTO-SPS).
- Codex Alimentarius Commission (Codex).
- International Plant Protection Convention (IPPC) of the Food and Agricultural Organization (FAO).

(l) RELATED ISSUES

There are no other issues related to plant biotechnology that are not captured under the current headings.

(m) MONITORING AND TESTING

There is no system in place for testing and monitoring of GE products.

(n) LOW LEVEL PRESENCE POLICY

There is currently no low level presence policy in Mozambique.

PART C: MARKETING

(a) MARKET ACCEPTANCE

If BT cotton and drought tolerant corn seed become available, post does not foresee any rejection from the subsistence and commercial farmers, as the farmers have been requested this technology for a long time.

(b) PUBLIC/PRIVATE OPINIONS

Most people in Mozambique are not aware about the technology. However, among scientist and the government there is a support for it.

(c) MARKETING STUDIES

Post is not aware of any marketing studies on GE products conducted in Mozambique.

PART D: CAPACITY BUILDING AND OUTREACH

(a) ACTIVITIES

Biotechnology outreach (April 16 – 20, 2012): During the week of April 16, FAS/Pretoria and FAS/Maputo staff met with a range of biotechnology stakeholders to determine the current status and political climate for the advancement of biotechnology in Mozambique, and to determine the best prospects for biotech outreach among decision-makers, producers, and consumers. Mozambique has shifted from its historical position of refusing to adopt agricultural biotechnology, and has embarked on a path of policy change that could allow for biotech field trials and eventual commercialization. However, the issue of liability and redress in conducting field trials, where the liability for damages would be placed on the private partner involved in conducting field trials, has created a disincentive for seed companies to partner in bt cotton field trials. This issue has caused multinational seed companies to be reluctant to assist Mozambique in its efforts to conduct cotton field trials.

Capacity Building (August 2-10, 2012): Post funded, through Country Strategy Statement Funds (CSSF), a technician from the Ministry of Science and Technology to attend a Biosafety Training Course at the Michigan State University.

Outreach to Advance Agricultural Biotechnology Cotton Field Trials in Mozambique (September 3 – 5, 2012): Funded with biotechnology resources from the Department of State's Economic Bureau, FAS/Pretoria facilitated the trip to Mozambique of a legal expert, Ms. Betty Kiplagat, to present at a workshop on biosafety liability and redress. Ms. Kiplagat, from ABNE, is a legal expert that specializes on intellectual property issues and has been involved in drafting regulations related to the management of GE crops in several African countries. The workshop was essential to assist Mozambique address gaps in the liability and redress articles of the latest proposed regulations. The way the proposed regulation is written, liability for damages would be placed on the private partner involved in conducting field trials. This issue has caused multinational seed companies to be reluctant to invest in Mozambique. If all the proposed changes discussed during the workshop are accepted by the Government of Mozambique, a functional framework would be established that could allow for the initiation of field trials.

The Plant Biotechnology and Biosafety Workshop (April 8-12, 2013): Through funding from the Office of the Secretary, post facilitated the participation of the Director of the Mozambique Cotton Institute, a Cotton Institute technician and the advisor in the Ministry of Environment Affairs, in a Biotechnology and Biosafety for African Countries workshop in Brazil. The Brazilian Agency for Cooperation, the U.S. Department of Agriculture, Embrapa, with support of the Ministry of Agriculture,

Livestock and Food Supply, the National Biosafety Committee, the Center for Environmental Risk Assessment, and Brazil's Biotechnology Information Council were involved in the workshop. Participants included policymakers and producers from Egypt, Ghana, Kenya, Malawi, Mozambique, Nigeria, and Uganda.

International Biotechnology Symposium (May 22-24, 2013): An International Biotechnology Symposium took place in May 2013 in Maputo. The symposium's aim was to discuss and exchange experiences in biotechnology, particularly in the context of developing countries. Participants included scientists, academics, policy makers, entrepreneurs, and organizations involved in biotechnology activities. Through funding from the Office of the Secretary, post brought Dr. Karim Maredia from the Michigan State University as key note speaker. Dr. Karim's presentation covered the United States' experience with GE crops and shared various possibilities of training in biotechnology available for Mozambican citizens.

Cochran Fellowship Program (August 3-10, 2013): Under the Cochran Fellowships Program, post coordinated the training of two biotechnology technicians at the Michigan State University. One participant is working at the Biotechnology Center of the University Eduardo Mondlane and the other at the Ministry of Science and Technology.

(b) STRATEGIES AND NEEDS

FAS/Pretoria's short term goals for biotechnology in Mozambique include:

- To seek opportunities for additional resources through the State EB biotech program, EMP funding, and other available funding sources to raise awareness of the benefits of biotechnology and the development of science-based regulatory systems in Mozambique.
- Collaborate with other like-minded countries such as Brazil, Argentina, and South Africa on outreach and training activities.
- To facilitate the advancement of biotech cotton and drought-tolerant corn field trials in Mozambique.

Additionally, outreach to small scale farmers on the benefits of biotechnology should also be a focus. Expanding this outreach to include consumer groups and the general public could achieve greater understanding and acceptance of biotechnology.