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Agricultural Biotechnology Annual

12 Parties to Cartagena Protocol in the Caribbean to Implement National Biosafety Frameworks

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Report Highlights:

Most of the countries within the Caribbean Community (CARICOM) have determined that the best way to address their biotech requirements is through a national biosafety framework. As a result, in June 2011, the United Nations Environment Programme/Global Environment Facility (UNEP/GEF) initiated a four-year, \$13 million Regional Project for Implementing National Biosafety Frameworks (NBF) in the Caribbean. The project is expected to finish by June 2015. Post is also not aware of any specific requirements related to the importation of biotech products in its region. Currently, the region relies heavily on the United States as its main supplier of food and agricultural products, and post expects this trend to continue for the next several years.

Section I. Executive Summary:

There are signs that public awareness of biotechnology throughout the CBATO islands of coverage^[1] has been increasing for the past several years. Several institutions have yielded a number of advances, including developing transgenic papaya varieties resistant to devastating papaya viruses as well as the development of biochemical compounds suitable for use as bio-pesticides. However, production of biotech products is still in the early stages of research and development. The Caribbean region is also not yet at the stage where biotech engineering (or cloning of animals) is being developed.

Post is not aware of any specific requirements related to the importation of biotech products in its region. Currently, the region relies heavily on the United States as its main supplier of food and agricultural products. Nearly, 95 percent of all corn, soybean, cotton and canola products are imported from the United States. Nevertheless, exporters of biotech crops should recognize that there may be an increase in regional public awareness campaigns (via radio, internet, brochures, etc.) on the use of biotechnology in the region.

Currently, no country within the Caribbean region has implemented biotech regulations. However, most of the countries within CARICOM^[2] have determined that the best way to address their biotech requirements is through a national biosafety framework. As a result, in June 2011, UNEP/GEF initiated a four-year, \$13 million Regional Project for Implementing NBFs in the Caribbean. The project will assist the 12 CARICOM countries that are parties to the Cartagena Protocol on Biosafety (CPB) to implement effective, operable, transparent and sustainable NBFs, deliver global benefits that are compliant with the CPB in the Caribbean sub-region countries, and protect against any potential risks from introduced living modified organisms (LMOs). The project is expected to end by June 2015.

^[1] *The CBATO islands of coverage are: Anguilla, Antigua & Barbuda, Aruba, The Bahamas, Barbados, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Guadeloupe, Martinique, Grenada, Montserrat, the former Netherlands Antilles (Curaçao, Bonaire, Sint Maarten, Saba & St. Eustatius), St. Kitts & Nevis, St. Lucia, Saint Martin, St. Barthélemy, St. Vincent & the Grenadines, Trinidad & Tobago, and Turks & Caicos Islands.*

^[2] *CARICOM Member States are: Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Montserrat, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago (CARICOM Associate Members are: Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Turks and Caicos Islands)*

Section II. Plant Biotechnology Trade and Production:

Biotechnology production is still in the early stages of research and development throughout the Caribbean Basin Agricultural Trade Office (CBATO) islands of coverage. Overall agricultural

production throughout the CBATO region is minimal, and most countries within the region must import the majority of their agricultural products. With a total land area of 23,783 sq. km. (9,183 sq. miles), roughly the size of New Hampshire, only about seven percent of the land is arable and an even smaller percentage is actually utilized for farming. The Caribbean region must complete more research before it can produce biotech crops.

Although there is no known production of biotech products in the region, several institutions have yielded a number of advances, including developing transgenic papaya varieties resistant to devastating papaya viruses as well as the development of biochemical compounds suitable for use as bio-pesticides. While the Caribbean region has started research on biotech products, according to various sources, only Trinidad and Tobago is advanced enough to actually produce biotech crops. Trinidad and Tobago has focused a lot of its biotech research on transgenic Anthuriums, but with no approved legal biosafety framework in place, they have decided to wait.

Meanwhile, St. Vincent and the Grenadines, St. Kitts and Nevis and Barbados are researching plant tissue culture. Grenada and St. Lucia are focusing most of their attention on biotech projects with bananas, cassava, orchids, plantains and sugarcane. Despite an increased appetite for producing biotech products, several countries recognize that the development and use of biotechnology should occur within a biosafety framework that supports innovation while protecting biodiversity. Currently, no country in the Caribbean region has an approved biosafety legal framework in place to oversee the production or release of LMOs. While most of the research takes place through various regional institutions, some of the Caribbean countries also work through their ministries of Agriculture, Environment, Health and Labor.

On a regional level, many research institutions throughout the Caribbean have recognized that the production of biotech products could lead to an increase in yields, improve food security and reduce the use of water in agriculture. These institutions have targeted several local products (sugarcane, cotton, rice, coconuts, cocoa, coffee, peppers, and spices) that could be improved using biotechnology. Some of the institutions leading the way are: the University of the West Indies (UWI), the Caribbean Agriculture and Development Institution (CARDI), the Caribbean Industrial Research Institute (CARIRI) in Trinidad and Tobago, and the National Agriculture Research Institute (NARI) in Guyana.

Trade

Post is not aware of any specific requirements related to the importation of biotech products in its region^[1]. Nine of the countries in the CBATO region are parties to the Cartagena Protocol on Biosafety^[2], but none have implemented it to date. According to various sources, any biosafety

^[1] *Guadeloupe and Martinique, as departments of France, may be exceptions to this statement.*

^[2] *Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago.*

framework (regional or national) that is approved would address the movement and trade of biotech products. Currently, the region relies heavily on the United States as its main supplier of food and agricultural products. Nearly, 95 percent of all corn, soybean, cotton and canola products are imported from the United States.

Within the Caribbean region, CARICOM is focused on establishing the Caribbean Single Market and Economy (CSME) that will administer the trade and movement of products between Member States. While it is still a long way from full implementation, the CSME could establish a system that monitors the free movement of biotech products. According to various sources, these regulations could have an impact on the movement of certain U.S. biotech products in the Caribbean.

Section III. Plant Biotechnology Policy:

Currently, no country within the Caribbean region has implemented biotech regulations. However, most of the countries within CARICOM have determined that the best way to address their biotech requirements is through a national biosafety framework. Some of the countries working on a biosafety framework are: Antigua and Barbuda, The Bahamas, Dominica, Grenada, and Guyana. Meanwhile, only Trinidad and Tobago has developed a draft policy that directly addresses biotechnology. Trinidad and Tobago's national biotechnology plan intends to: create new businesses based on biotechnology, develop an investment platform to spur biotechnology activity, and to establish a regulatory and institutional framework that manages biotechnological development. Other countries throughout the Caribbean have not indicated if they are going to develop a biotech policy, but post believes that some of these countries will more than likely wait to examine various draft versions (biosafety or biotech) from other neighboring countries before developing their own policy.

The Regional Project for Implementing NBFs

In June 2011, UN/GEF initiated a four-year, \$13 million Regional Project for Implementing National Biosafety Frameworks (NBF) in the Caribbean. The project will assist the 12 CARICOM countries that are parties to the Cartagena Protocol on Biosafety (CPB) with implementation of their obligations. This project is a continuation from previous UN/GEF biosafety capacity building efforts in the region.

The overall goal of the UNEP/GEF project is to implement effective, operable, transparent and sustainable NBFs, deliver global benefits that are compliant with the CPB in the Caribbean sub-region countries while also protecting against any potential risks from introduced living modified organisms (LMOs). The four project aims are to:

- establish institutional (policy/legal) frameworks for biosafety at both the national and regional levels that will allow Parties to the CPB utilize modern biotechnology in compliance with this Protocol;
- facilitate the establishment, enhancement and operation of institutional capacities as well as technical and technological resources among the participating Caribbean Member States for the detection, assessment and management of potential risks from modern biotechnology (in combination with invasive alien species (IAS) where appropriate) at the national and regional levels;
- develop and strengthen the human resource base and level of expertise in biosafety on a national and regional scale, in support of biosafety management and national biosafety systems in the Caribbean;
- improve and consolidate biosafety information management within the Caribbean project countries in a way that can promote transparency, raise public awareness and facilitate the biosafety decision making, and be up scaled to provide broader regional information services as needed, and if possible, establish links to information sources.

Like any international project in the Caribbean, development that is regional in scope must transcend

the national level as well. The regional portion of the project is expected to support the establishment of a region-wide mechanism for coordinating and supporting countries in biosafety management by providing them with training on biosafety risk and the management of LMOs. According to various sources, the regional aspect could also create a Regional Biosafety Clearing House (BCH) to support and coordinate information exchange. The regional process is also expected to strengthen institutional capacities and provide technical guidance on biosafety issues in the region as well as assist with the implementation of NBFs.

Meanwhile, national activities of the project will support the establishment in the twelve countries of the necessary legal and institutional frameworks, public education programs and training necessary for effective and sustained implementation of the CPB. Country-specific expected outcomes include establishing:

- functional NBFs in line with the CPB and the national and regional needs of each country;
- functional national systems able to detect LMOs and perform risk assessments;
- functional systems to monitor the environment and enforce regulations;
- national systems for biosafety information management while stimulating public awareness, biosafety education, and participation in the decision-making process.

This project will also involve several key regional institutions, all with different areas of expertise. Some of the institutions will focus on writing NBFs while others will assist with biosafety educational programs for the region. Technical assistance on trade-related issues is also expected to be a main focus for some of the institutions. The project is expected to end by June 2015.

Section IV. Plant Biotechnology Marketing Issues:

There are signs that public awareness of biotechnology throughout the Caribbean has been increasing for the past several years. Nonetheless, there are still no significant marketing issues that currently affect U.S. products. However, some countries that export organically grown crops to niche markets in Europe are concerned with various biodiversity issues. With the islands being so small, these countries are specifically concerned that the coexistence of any biotech material introduced into the islands could jeopardize their exports to Europe. This concern may be a factor in shaping the regulatory environment in some of the countries in the future and could have marketing impact on some U.S. products.

Exporters of biotech crops should also recognize that there may be regional public awareness campaigns (via radio, internet, brochures, etc.) on the use of biotechnology in the region. As mentioned earlier, the UN/GEF project will also undertake “awareness raising activities” at the national level to alert the public on biosafety, biotechnology, bio-security and invasive species. The project will also support stakeholder consultations as part of the national processes to enact biosafety regulations, and it is anticipated that most of the CARICOM countries in the region will use similar procedures.

Section V. Plant Biotechnology Capacity Building and Outreach:

With an increase in food security concerns and being an importer of more than 80 percent of its agricultural products, CARICOM countries are beginning to take steps to coordinate more closely to address biotech imports, local production and biosafety regulations. On a regional level, there appears to be minimal coordination between research institutions and national organizations. According to our sources, there is also a lack of relevant biotech data to inform decision-makers, and it stands in the way of the region’s ability to establish the necessary biotech regulations. Sources have also claimed that

there is an insufficient understanding of how biotech products will impact the environment. There seems to also be inadequate material upon which to base education, training and awareness programs at the national and regional levels.

As a result, and in an effort to address the region's capacity building needs, the aforementioned UNEP/GEF project aims to:

- harmonize biosafety and biotechnology plans and policies into agricultural, environmental, health, educational, and other national plans;
- develop a regional biotech database;
- collaborate with regional organizations and train officials on biotech-related issues;
- develop a communication and information sharing network; and
- develop manuals, protocols and procedures to deal with biosafety issues.

Recognizing the economic importance of biotechnology and the need for countries to uniformly manage the potential risks to trade, the CARICOM Council for Trade and Economic Development (COTED) established the CARICOM Working Group on Biotechnology/GM Organisms. This working group includes biotechnology experts from the region and has been tasked to organize biotech information, analyze technical data and coordinate between various countries. In return, numerous Caribbean Governments have already started coordinating with their counterparts on biotech issues. While the Caribbean region is still in the early stages of strengthening its capacity, there has already been movement on biotech initiatives through CARICOM and the UNEP/GEF project.

Section VI. Animal Biotechnology:

The Caribbean region is not yet at the stage where biotech engineering (or cloning of animals) is being developed. Even though there has been minimal biotech research in Barbados on Blackbelly sheep, the region is far from having the capability to engage on specific animal biotechnology projects. However, the region recognizes that there must be an expansion of animal breeding using conventional and new embryo techniques as well as DNA techniques to characterize regional species. The use of molecular techniques to identify genes for breeding purposes will be at the top of research agendas for several countries during the next couple of years.