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Approved by:

R. Todd Drennan
U.S. Embassy

Prepared by:

Adriana Uribe & Alberto Restrepo

Report Highlights:

Colombian agricultural groups strongly support adoption of biotechnology, while some environmental groups have raised limited concerns. Over the past 18 months, Colombia has made significant progress in approving biotechnology products for local production. The Ministry of Social Protection, however, has increased its interest in biotechnology products for human consumption creating concern regarding import requirements for some biotechnology grains and vegetable oils.

Includes PSD Changes: No
Includes Trade Matrix: No
Annual Report
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[CO]

Section I. Executive Summary

Colombia is the largest market for U.S. agricultural products in Central and South America and is one of the top ten markets for U.S. corn. To date, Colombian biotechnology regulations do not impede commercial U.S. exports, although there is a pending approval issue with a living modified organism (LMO) that has delayed imports of U.S. rice for a Colombian food aid program.

The Colombian legal framework for mandating biotechnology regulations for agricultural products is under continual review. Colombia approved the Cartagena Protocol on Biosafety in 2002. In 2005, Decree 4525 was published to implement the Protocol, and since then to the present, several other Ministerial resolutions were published to outline specific requirements and procedures for approving and using LMO products. To some extent, Colombia's biotechnology regulations are still a work in progress, which provides an opportunity to develop training activities that would facilitate the adoption of science-based regulations. Colombia has created three technical biotechnology committees called the National Technical Committee for Agriculture, Fishery, Forestry and Agro-industry (CTN-Bio), the National Technical Committee for Environment (CTN-Environment), and the National Technical Committee for Health and Human Nutrition (CTN-Health).

Prior to 2006, the only LMO products planted on a non-restricted commercial basis in Colombia were Bollgard and Roundup-Ready cotton varieties. In February 2007, the Colombian Government approved Bollgard/Roundup-Ready cotton, the first stacked LMO product, which is a product with two or more genetically modified traits. In addition, the GOC has approved commercial plantings of LMO corn for limited commercial use. Biotech blue carnations continue to be approved for limited commercial production, but only for export. There are pending license applications for several other crops that are in varying phases of approval (see Appendices A and B). In 2007, Colombia is expected to plant over 27,000 hectares of LMO commodities, up from 3,000 hectares in 2003.

Section II. Biotechnology Trade and Production

Area planted to LMO Bollgard cotton increased from 7,324 hectares in 2003, to 21,705 hectares in 2007. At the beginning of 2007, the Government of Colombia approved new LMO products for both cotton and corn. Some of them were approved for commercial plantings and some only for biosafety assessment. Roundup-Ready cotton was extended to the Upper Magdalena and Cauca river valleys. So far, however, the area planted with Roundup-Ready cotton has been less than 300 hectares. By the end of 2007, it is expected that about 4,000 hectares of Bollgard/Roundup-Ready cottonseed will be planted replacing the original Bollgard LMO cottonseed. This stacked event was approved for commercial plantings in the upper Magdalena and Cauca river valleys. In addition to LMO cotton, the Colombian Government also approved, for the first time, commercial plantings of corn. Two varieties, Dupont's Herculex I and Monsanto's Yieldgard corn were approved for commercial use in the humid Caribbean region, Cauca river valley and eastern plains (Meta). Together, total area planted of these LMO products is expected to reach 6,000 hectares this year. Dutch blue carnations continue to be approved since 2000 for limited commercial production of exportable short-stem cut flowers under greenhouse conditions for a total of 4 hectares in central Colombia. Blue carnation exports are destined to the European market.

In addition to the above-mentioned LMO events, Colombia is currently working on several biotechnology crops for regulatory approval for commercial plantings. Information indicates that Flower Development, a private Dutch company, is working on roses with blue petals. Many crops and crop products may be commercially released in 2008 (See Appendices A and B).

Due to the fact that Colombia has not domestically developed any biotechnology crops as of this date, LMO seeds are imported mostly from the United States and occasionally from South Africa, Argentina and Australia. See Appendices A and B for more details. There are several Colombian organizations conducting specific research projects. The sugar cane research center (Cenicana) is looking to develop a sugar cane variety resistant to the yellow leaf virus; the International Center for Tropical Agriculture (CIAT) is working on rice, grazing grass, and cassava; and the Coffee Research Center (Cenicafe) is working on a coffee variety that is resistant to coffee borer (broca).

Section III. Biotechnology Policy

The Government of Colombia is a strong supporter of agricultural biotechnology and as such, is developing a regulatory framework to implement the Cartagena Biosafety Protocol. The Cartagena Protocol specifically focuses on trans border movement of any LMO resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity. Colombia approved the Biosafety Protocol via the publication of Law 740 in 2002, which became fully enforced in September 2003. As of today, regulations to implement the above mentioned law are outlined in decree 4525 of December 6, 2005; Colombian Agricultural Institute (ICA) resolution 1063 of March 22, 2005; ICA resolution 000946 of April 17, 2006; and Ministry of Social Protection resolution 0227 of February 1, 2007. The following entities are responsible for biotechnology risk assessments:

1. Ministry of the Environment, Housing and Territorial Development.
2. Ministry of the Social Protection.
3. Ministry of Agriculture and Rural Development.
4. Colciencias (Colombian Entity for the Development of Science and Technology).
5. National Institute for the Surveillance of Food and Medicines (INVIMA).
6. Colombian Agricultural Institute (ICA).

Decree 4525 of December 6, 2005, established three interagency committees composed of the above-mentioned entities that are responsible for evaluation and approval of biosafety issues:

National Technical Committee for Agriculture, Fishery, Forestry and Agro-industry

(CTN-Bio): The committee's role is to assess biotechnology events for introduction of LMO events for the listed sectors. The committee has been historically slow in approving new-to-market LMO products creating problems for U.S. seed exports. The government of Colombia only allows biotechnology materials for commercial plantings after the material has been previously approved. In order to be approved, each variety with a specific gene must go through a lengthy approval process that has to comply with strict regulations step by step. Colombia allows field-testing for biotechnology crops (see Appendix A) after a risk assessment is submitted to the CTN-Bio. The Committee recommends ICA to conduct the biosafety evaluation. There is no estimated time for commercial release due to institutional obstacles. These dissenting institutional reservations have to be resolved before new applications for admittance are considered.

Regarding "stacked" events, CTN-Bio requires running the field-testing again as if the seed were a completely new one. Even though the individual traits were already accepted, the "stacked" variety has to begin the process all over. With respect to the coexistence between biotechnology and non-biotechnology crops in Colombia, there is no written regulation. However, ICA has carried out an evaluation of cross-pollination on cotton and found out that both LMO and non-LMO crops may coexist. Nevertheless, farmers continue to use buffer areas (a natural barrier of fallow terrain between the two plantings). On labeling, ICA

resolutions 3492 of December 22, 1998 and 2935, October 23, 2001 were superseded by ICA resolution 946 of April 17, 2006, which still requires labeling on biotechnology materials (seeds or other plant reproductive materials and animal products). It should read in Spanish: "LIVING MODIFIED ORGANISMS". The requirement is justified as needed consumer information.

National Technical Committee for Environment (CTN-Environment). The committee function is to assess biotechnology events for introduction of LMO events that impact the environment. This CTN is not yet operational.

The National Technical Committee for Health and Human Nutrition (CTN-Health):

CTN-Health's function is to assess the impact of genetically modified events in LMO products and by-products on human health. On February 1, 2007, the Ministry of Social Protection issued resolution 0227 to establish the functions of the committee making it fully operational. However, there is no established protocol for evaluating individual genetically modified events. Colombia, as a signatory of the Cartagena Biosafety Protocol, is bound by the procedures established in the Protocol on approving LMO products. According to the Protocol, Colombia cannot approve LMO events by extension. This has created a situation where the Ministry of Social Protection has prohibited the import of U.S. rice due to findings of trace amounts of LMO material in some experimental Liberty Link rice that enter the U.S. commercial market. The policy is affecting the approval of 2,700 metric tons of U.S. rice for the World Food Program to use in a feeding program in Colombia. FAS/Bogota is currently working with the Ministry of Social Protection and other GOC agencies to find a solution. The rice case may set a precedent by the GOC to evaluate other U.S. commercial imports, i.e. feed corn and soybeans. Regarding labeling, CTN-Health has not implemented any labeling requirement on finished packaged foods and feeds as of this date.

Although Colombia's approach to biotechnology has been favorable, some environmental groups are putting pressure on some GOC decisions. In addition, some indigenous groups have been inspired by NGOs to oppose the introduction of LMOs based on land tenure and biodiversity concerns. The GOC's structure for biotechnology regulations is based on science-based decisions of accepting or rejecting new biotechnology events. The basic principle is to adopt the technologies that may help the economic/social development of Colombia. The Ministry of Environment has been the most controversial voice on biotechnology approvals.

Section IV. Marketing Issues.

Biotechnology has been in Colombia for the last 15 years, but biotechnology regulations are a relatively new issue. Most press coverage is favorable to biotechnology. To date consumers have not voiced any concerns about biotechnology products or products containing biotechnology raw materials. There are no commercial barriers related to biotechnology products. Over the past several months, however, the Ministry of Social Protection, through INVIMA, has prohibited the import of U.S. rice because of possible traces of LMO material that has not been approved in Colombia. CTN-Health is currently reviewing research material on the LMO rice varieties and should have a recommendation by the end of July 2007. The recommendation will be sent to the office of the Minister for consideration and an official decision is expected by mid-August.

Regarding biotechnology fees, the Government of Colombia does not have any legislation in place to collect technology fees.

Section V. Capacity Building and Outreach

Since Colombia is in the process of developing LMO regulations, FAS/Bogota has been working together with different groups to disseminate information on the benefits and to expand the application of agricultural biotechnology. Keeping this in mind, FAS has carried out the following activities in the previous years:

- September 2003: Three leading Colombian journalists attended a biotechnology tour in the United States.
- July 2004: Two Colombian officials attended a two-week "Biotech Short Course" on regulatory and trade issues at Michigan State University.
- August 2004: Farmer-to-Farmer Biotechnology Workshop at the University of Zamorano in Honduras. A leading Colombian cotton producer and agricultural leader attended.
- February, 2006: a Cochran candidate attended a tailor made program in the United States on biotechnology.
- July 23-25, 2007: FAS and State jointly sponsored a biotechnology conference for Government officials held in Bogotá and followed by meetings with research organizations in Cali.

Section VI. Reference Material

Government

ICA- Colombian Agricultural Institute

www.ica.gov.co

Ministry of the Environment, Housing and Territorial Development

www.minambiente.gov.co

Ministry of the Social Protection

www.minproteccionsocial.gov.co

Ministry of Agriculture and Rural Development

www.minagricultura.gov.co

Colciencias (Colombian Entity for the Development of Science and Technology)

www.colciencias.gov.co

National Institute for the Surveillance of Food and Medicines (INVIMA)

www.invima.gov.co

Private Sector

Agrobio

www.agrobio.org

Other Research Institutes

CIAT (the International Center for Tropical Agriculture)

www.ciat.cgiar.org

Cenicaña (the sugar cane research center)

www.cenicana.org

Cenicafe (the Coffee Research Center)

www.cenicafe.org

Section VII. Follow-up Activities

While Colombia has made significant progress in opening its markets to biotechnology products, it can still greatly benefit from additional collaborations in the areas of developing risk-assessment policies and procedures and developing biotech-friendly regulations. In 2007/2008, FAS/Bogota will conduct additional workshops and activities to provide Colombian government officials, academics and media the latest information and progress in biotechnology development. This will include inviting U.S. experts to come to Colombia as well as taking scientists and important Colombian policy makers to the United States. The focus of these activities will be in the areas of food safety and environmental impacts.

If approved, Emerging Markets, Section 108, and Cochran funds will be used for the following activities:

- Invite GOC officials and scientists dealing with human health and environmental biotech issues to the United States to meet their counterparts and see how the United States develops its biotechnology policies and regulations.
- Conduct a seminar in Colombia on relevant biotechnology issues to disseminate information to GOC officials, media and relevant Colombian producer groups.
- A follow-up media tour activity for promising leading journalists to help better understand some of the common misconceptions about biotechnology.

APPENDIX A. COLOMBIA: CURRENT STATUS OF BIOTECHNOLOGY PRODUCTS

Crop	Requesting Company	New Characteristics of Biotechnology	Authorized Activity
Carnation	Flores Colombianas Ltda. (Holland)	Blue Carnation	Approved in 2000 for commercial multiplication of cut flowers.
Carnation	Flower Development (Holland)	Blue Carnation	Approved for biosafety studies per risk assessment in 2005 (green house conditions).
Roses	Flower Development (Holland)	Blue Petal Roses	Approved for biosafety studies per risk assessment in 2005 (green house conditions).
Bollgard Cotton	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects.	Approved for commercial plantings since 2003 in the humid Caribbean region, the upper Magdalena river valley (Tolima and Huila) and Cauca river valley. Approved for commercial plantings in the dry Caribbean region in May, 2004.
Roundup Ready Cotton	COACOL-Monsanto (United States)	Tolerant to Roundup herbicide.	Approved in 2004 for commercial plantings in the dry Caribbean and humid Caribbean regions. Approved in 2007 for commercial plantings in the upper Magdalena river valley (Tolima and Huila) and Cauca river valley.
Bollgard/Roundup Ready Cotton	COACOL-Monsanto (United States)	Resistant to a wider variety of lepidopterous insects and completely tolerant to Roundup herbicide.	Approved in 2007 for commercial plantings in the upper Magdalena river valley (Tolima and Huila) and Cauca river valley.

Crop	Requesting Company	New Characteristics of Biotechnology	Authorized Activity
Bollgard II and Roundup Ready Flex Cotton	COACOL-Monsanto (United States)	Resistant to a wider variety of lepidopterous insects and completely tolerant to Roundup herbicide.	Approved for biosafety studies per risk assessment in 2005.
Rice	CIAT (Colombia)	Resistant to White Leaf virus	Approved in 2000 for restricted research and small-scale plantings in open fields, in accordance with risk assessment.
Cassava	CIAT (Colombia)	Resistant to the borer of stem/stalk	Approved in 2000 for restricted research per risk assessment
Cassava	CIAT (Colombia)	Modification of cytokine production	Approved for biosafety studies per risk assessment in 2005.
Cassava	CIAT (Colombia)	Modification of amilopectin production	Approved for biosafety studies per risk assessment in 2005.
Cassava	CIAT (Colombia)	Modification of cyanide content	Approved for biosafety studies per risk assessment in 2005.
Brachiaria (grass)	CIAT (Colombia)	"frog hopper" resistant	Approved in 2000 for restricted research per risk assessment
Coffee	CENICAFE (Colombia)	Borer resistant	Approved in 2000 for restricted research per risk assessment.
Sugar cane	CENICAÑA (Colombia)	Resistant to the yellow leaf syndrome	Approved in 2003 for restricted research and small-scale plantings in open fields per risk assessment.
Yieldgard Corn	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects	Approved in 2007 for commercial plantings in the humid Caribbean region, upper Magdalena river (Tolima, Huila), Cauca river valley and eastern plains. Approved in 2007 for biosafety field trials in the dry Caribbean and the Coffee region.

Crop	Requesting Company	New Characteristics of Biotechnology	Authorized Activity
Yieldgard 2	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects and tolerant to Roundup herbicide	Risk assessment.
Roundup Ready Corn (RR 2 corn)	COACOL-Monsanto (United States)	Tolerant to Roundup herbicide.	Approved in 2007 for biosafety field trials in the dry Caribbean and the Coffee region. Approved in 2007 for commercial plantings in the humid Caribbean region (Cordoba), upper Magdalena river valley (Tolima, Huila), Cauca river valley and eastern plains (Meta).
Herculex I corn	Dupont (United States)	Resistant to some lepidopterous insects	Approved in 2007 for commercial plantings in the humid Caribbean region, Cauca river valley and eastern plains (Meta).
Bt 11 corn	Syngenta (Switzerland)	Resistant to some lepidopterous insects	Approved for biosafety studies per risk assessment in 2005.
CCR corn	Syngenta (Switzerland)	Tolerant to Roundup herbicide and resistant to rootworm.	Risk assessment.
Potatoes	Corporacion de Investigaciones Biologicas (CIB) (Colombia)	Resistant to some lepidopterous insects	The National Biosafety Committee postponed the study of risk assessment.

APPENDIX B. COLOMBIA: CURRENT STATUS OF BIOTECHNOLOGY PRODUCT APPLICATIONS FOR FOOD AND FEED.

Crop	Requesting Company	New Characteristics of Biotechnology	Approved Applications	Approval Date
Bollgard cotton	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects	Refined cooking oil	06/08/2003
Roundup Ready cotton	COACOL-Monsanto (United States)	Tolerant to Roundup herbicide	Refined cooking oil	11/12/2003
Bollgard II cotton	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.
Roundup Ready Flex cotton	COACOL-Monsanto (United States)	Tolerant to Roundup herbicide and to a wider spectrum of weeds	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.
Bollgard II+Roundup Ready Flex cotton	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects, tolerant to Roundup herbicide and to a wider spectrum of weeds	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.
Bollgard+Roundup Ready cotton	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects and tolerant to Roundup herbicide	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.
Yieldgard corn	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects	Refined cooking oil	11/12/2003
Yieldgard corn	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects	Corn flour	02/26/2004
Roundup Ready corn	COACOL-Monsanto (United States)	Tolerant to Roundup herbicide	Corn flour	04/22/2004

Crop	Requesting Company	New Characteristics of Biotechnology	Approved Applications	Approval Date
Roundup Ready corn	COACOL-Monsanto (United States)	Tolerant to Roundup herbicide	Refined cooking oil	04/22/2004
Yieldgard Rootworm corn	COACOL-Monsanto (United States)	Resistant to rootworm	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.
Bt Herculex I corn	Dupont (United States)	Resistant to some lepidopterous insects	Raw material for food and feed	Approved
Yieldgard+Lysine corn	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects. High lysine content	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.
Yieldgard II corn	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects	Raw material for food and feed	Approved for feed.
Yieldgard+Roundup Ready corn	COACOL-Monsanto (United States)	Resistant to some lepidopterous insects and tolerant to Roundup herbicide	Raw material for food and feed	Approved for feed
CCR corn	Syngenta (Holland)	Resistant to some lepidopterous insects and tolerant to Roundup herbicide	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.
CRW corn		Resistant to rootworm	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.
Yieldgard+CCR corn		Resistant to some lepidopterous insects, rootworm and tolerant to Roundup herbicide	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.

Crop	Requesting Company	New Characteristics of Biotechnology	Approved Applications	Approval Date
Lysine corn		High lysine content	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.
Roundup Ready wheat	COACOL-Monsanto (United States)	Tolerant to Roundup herbicide	Raw material for food and feed	Approved
Roundup Ready soybeans	COACOL-Monsanto (United States)	Tolerant to Roundup herbicide	Raw material for food	Approved
Roundup Ready 2Yield soybeans	COACOL-Monsanto (United States)	Tolerant to Roundup herbicide	Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.
Roundup Ready sugar beet	COACOL-Monsanto (United States)	Tolerant to Roundup herbicide	Raw material for food	Approved
Liberty-link rice	COACOL-Monsanto (United States)		Raw material for food and feed	Pending ICA's approval for feed and INVIMA's for food.