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Honduras

Agricultural Biotechnology Annual

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Report Highlights:
Honduras allows commercial production of genetically engineered (GE) crops. As of October 2016, planted GE corn areas increased by 13 percent to 38,700 hectares from the previous year. Honduras has had biotechnology regulation and a committee since 1998. The regulation only covers plants.

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SECTION I: EXECUTIVE SUMMARY

Major U.S. agricultural exports to Honduras are soybean meal, yellow corn, rice, wheat, pork and prepared food products. Honduras's production of genetically engineered (GE) plants is mainly corn used for feed, food and cultivation.

Honduras is the only country in Central America, and one of seven countries in Latin America, that allows commercial cultivation of GE crops. Planted area of GE corn as of October 2016 was 38,700 hectares (ha), a 13 percent increase from the previous year. GE plants are prohibited in three of the 18 departments, one municipality and regions higher than 1,000 meters above sea level**,** as requested by those communities. Low corn yields and high poverty levels are present in the areas where GE plants are restricted.

Since 1998, Honduras's biotechnology system has been regulated by the "Biosecurity Regulation with Emphasis in Transgenic Plants" regulation. The National Service of Food Safety, Plant and Animal Health (SENASA) is the responsible agency for agricultural biotechnology regulation and policy. A National Committee of Biotechnology and Biosecurity evaluates and analyzes GE requests. There are no regulations for GE animals, animal clones or pharmaceutical developments. Honduras actively participates in agricultural biotechnology conferences and other international fora, sharing the experience of Honduran regulations to facilitate processes for the use of agricultural biotechnology. There are no expected changes to the regulations.

Honduras's production of GE corn seed is sold within the domestic market for agroindustry and is exported to Colombia. Honduras imports yellow corn and soybean meal to supply its poultry, livestock,

shrimp, and tilapia industries.

SECTION II: PLANT AND ANIMAL BIOTECHNOLOGY

CHAPTER 1: PLANT BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE

a) PRODUCT DEVELOPMENT: Honduras currently does not have new requests for the development of GE plants. There is no development of antibiotics, functional foods/feeds, or pharmaceuticals using GE techniques or GE plants.

b) COMMERCIAL PRODUCTION: Honduras allows the commercial cultivation of GE crops, including for corn seed production. Honduras produces "stacked" commercial events: VTPRO (MON 89034 + MON 88017) and (MON 89034 + NK603 + TC1507). The commercial GE seeds are YieldGard (MON810), Roundup Ready (NK603) and Herculex I (TC1507). The area planted with GE corn as of October 2016, was 38,700 hectares (ha.), an increase of 13 percent from 2015. Authorizations for planting do not have an expiration date. The commercial cultivation of GE crops is for food/feed consumption and seed production.

c) EXPORTS: Honduras exports GE corn seeds to Colombia. Honduras exported basic category GE corn seeds to the United States from 2009 to 2014. The export documentation declares the content of GE material. The product exported to the United States received approval from the U.S. regulatory system.

d) IMPORTS: Honduras imports GE crops, GE processed products, and GE seeds directly into the country. Imports of yellow corn and soybean meal from the United States might come from GE production. These inputs are to support the poultry, livestock, shrimp, and tilapia industries. In 2015, Honduras imported corn (mostly yellow) from the United States valued at $77.6 million. Imports of soybean meal from the United States were $91.3 million.

e) FOOD AID RECIPIENT COUNTRIES: Honduras has been a food aid recipient since 1999. The Government of Honduras (GOH) has accepted U.S. food donations of soybean meal and yellow corn for the agroindustry. There are no barriers related to biotechnology that impede the importation of food aid.

f) TRADE BARRIERS: Not applicable.

PART B: POLICY

a) REGULATORY FRAMEWORK:

i. The Secretariat of Agriculture and Livestock (SAG), through the National Service of Food Safety, Plant and Animal Health (SENASA) oversees the regulation of GE plants. SENASA's Seeds Certification Department initiated the "Biosecurity Regulation with Emphasis on Transgenic Plants",

which was approved by the GOH in 1998 through Agreement No.1570-98. The legal basis for this regulation is the Phytozoosanitary Law. As part of CAFTA-DR, the Phytozoosanitary Law was reviewed and modified by Decree No. 344-2005 published in 2006.

The Regulation gives SENASA responsibility for the regulatory framework for agricultural biotechnology, including GE product import requests, field testing, and commercialization requests for GE crops. The regulation applies to food, feed, seed, and environmental safety issues.

ii. Role and membership of the National Committee of Biotechnology and Biosecurity: The Biosecurity Regulation with Emphasis in Transgenic Plants provides the procedures to evaluate a request and assigns the scientific analysis to the National Committee of Biotechnology and Biosecurity (NCBB). The NCBB was created in 1998 to provide advice to SENASA in the decision-making process. The Committee is composed of scientists from the following ten public and private institutions:

- National Service of Food Safety, Plant and Animal Health (SENASA). Focal point for the Cartagena Protocol.
- Directorate of Science and Agricultural/Livestock Technology (DICTA)/SAG
- Focal Point of the Codex Alimentarius in SAG
- Ministry of Public Health
- Ministry of Renewable Resources and Environment (Mi Ambiente)
- Competitiveness and Innovation Directorate, Secretariat of Planning (SEPLAN)
- National University of Honduras (UNAH)
- Honduran Foundation for Agricultural Research (FHIA)
- Pan American School of Agriculture - "Zamorano"
- Standard Fruit Company

iii. Assessment of political factors: After the NCBB provides a scientific recommendation, the political decision for an approval of an event, and its commercialization, is with the General Director of SENASA. The legal grounds of the Phytozoosanitary Law published in 2006, and the regulation with Emphasis in Transgenic Plants, are to provide the General Director of SENASA reliable tools for the field trials, semi-commercialization, and commercialization of GE crops.

iv. Honduras does not make distinctions in regulatory treatment for approval between food, feed, processing and environmental release (cultivation). The exceptions are those mentioned in the Cartagena Protocol.

v. Pertinent and pending legislation: The commercialization of GE products in Honduras does not affect U.S. exports. This is because of the approved legal framework, and the acceptance of industry and consumers of GE products from the United States. The Law for the Protection of New Varieties of Plants was approved by Decree 21-2012 of the Honduran Congress in 2012, and by the Honduran President in 2014. Currently, the regulation is pending for signature of the President of Honduras to become official.

vi. The process for the commercialization of an event has three stages: field test, pre-commercial, and

commercialization. The detailed approval process is the following:

- The NCBB recommends companies carry out field tests within normal production cycles: the first cycle of planting begins in May or June, and the second cycle begins in August or September.

- After the test stage is completed, the NCBB advises SENASA to extend the pre-commercial area from one hectare up to 500 hectares, depending on the company's request.

- The regulation for biosecurity indicates that the NCBB should provide an answer to a request within 90 days. The estimated time until commercialization varies according to the questions or doubts that the NCBB raises. In some cases, the NCBB requests more information from field tests as part of the pre-commercial stage.

- After the NCBB reaches a consensus, it provides a scientific recommendation and forwards the decision for approval of an event and its commercialization to the General Director of SENASA.

- The Director of SENASA notifies the resolution and findings of the NCBB to the requesting company.

vii. Legislation or regulation not in place: Not applicable.

b) APPROVALS:

Table 1. Approved Crop/Events

Approval Year	Company	Crop	Event	Type of approval	Usage
2001	Monsanto	Corn	MON 810 + NK 603	Commercial	Feed, food and seed production
2010	Pioneer	Corn	TC 1507	Commercial	Feed, food, cultivation
2011	Bayer Cropscience	Rice	LLRice62	Commercial	Food
2012	Monsanto	Corn	MON 89034	Commercial	Feed, food and seed production

2013	Monsanto	Corn	MON 88017	Commercial	Feed, food and seed production
2013	Monsanto	Corn	MON 89034 + MON 88017	Commercial	Feed, food and seed production
2014	Dow Agroscience	Corn	MON 89034 + NK603 + TC1507	Commercial	Feed, food, cultivation

Source: SAG's National Service of Food Safety, Plant and Animal Health (SENASA), Seeds Certification Department

c) STACKED EVENT APPROVALS: Honduras has approved stacked events since 2010. If an event is already registered individually, it doesn't need to be registered again when is part of a stacked event. The NCBB requests that a risk analysis of the stacked event has to be reported to the Biosafety Clearing House of the Cartagena Protocol.

d) FIELD TESTING: Honduras currently allows field testing and commercialization of GE crops. The requirements to request field testing and commercial liberation of an event are based on the Phytozoosanitary Law and the Biosecurity Regulation with Emphasis in Transgenic Plants. The process is the following: (1) a company submits a request to SENASA; (2) SENASA's Director summons the NCBB to review the request; and (3) each institution in the NCBB carries out its analysis. Depending on issues raised during the analysis, they continue to meet until a consensus is reached. The area for the field test is usually conducted on one hectare of land.

e) INNOVATIVE BIOTECHNOLOGIES: Not Applicable.

f) COEXISTENCE: GE corn is not planted in the three departments of Intibucá, Lempira, or Gracias a Dios, nor in the municipality of Pespire, Choluteca. GE planting is also restricted to areas away from native corn stocks, and regions higher than 1,000 meters above sea level at the request of those communities. The impact of these rules on the cultivation of GE crops are the lack of opportunities for producers to improve yields and increase their income in those areas and compete with producers that are able to use GE seeds in other areas of the country.

g) LABELING: SENASA requires labeling for GE corn seed for planting. It does not require labeling for bulk shipments, raw material, packaged foods, feed or other products derived from and/or containing ingredients from GE plants.

h) MONITORING AND TESTING: Not applicable.

i) LOW-LEVEL PRESENCE POLICY (LLP): Not applicable.

j) ADDITIONAL REGULATORY REQUIREMENTS: After an event has been approved to be commercialized, it needs to be registered at the Seeds Certification Department of SENASA, prior to use. Registrations do not expire.

k) INTELLECTUAL PROPERTY RIGHTS (IPR): The law protects intellectual property rights of the

developer of new varieties and the variety itself. This is done through the Law for the Protection of New Varieties of Plants approved by Decree 21-2012 by the Honduran Congress in 2012 and signed by the President of Honduras in 2014.

l) CARTAGENA PROTOCOL RATIFICATION: The Honduras Congress ratified the Cartagena Protocol on Biosafety to the United Nations' Convention on Biological Diversity in September 2008.

m) INTERNATIONAL TREATIES/FORA: Honduras actively participates in discussions related to GE plants within international fora, sharing its positive experience to facilitate processes for the use of agricultural biotechnology. The country complies with the International Union for the Protection of New Varieties of Plants (UPOV). UPOV is an intergovernmental organization established by the International Convention for the Protection of New Varieties of Plants. The Convention promotes an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.

n) RELATED ISSUES: Expanded use of biotechnology has the potential to benefit Honduran society. As of October 2016, there are 38,700 ha. planted with GE corn, up 13 percent from 2015. There has been an increase in planting in 2016, due to favorable weather conditions and better market prices for GE corn. There are nearly 175,000 ha. of non-GE corn planted in Honduras, using mostly traditional (non-hybrid) seed. According to producer data, average corn yield for traditional (creole) seed is 2 metric tons per ha., for improved varieties 4.5 metric tons per ha., for hybrid seed 5.5 metric tons per ha., and for GE seeds 7.6 metric tons per ha.

History of Biotechnology in Honduras:

Approval Year	Company	Crop	Commercial Name	Event	Type of Approval
1997	Syngenta	Banana		H17, H20, H51, H53	Field trial
1998	Monsanto	Corn	YieldGard & Roundup Ready	MON 810 & NK 603	Field trial
2001	Monsanto	Corn	YieldGard & Roundup Ready	MON 810 & NK 603	Commercial
2002	Monsanto	Soybeans		40-3-2	Field trial
2003	Syngenta	Banana		40-3-2	Field trial
2006	Pioneer	Corn	Herculex I	TC 1507	Field trial
2006	Monsanto	Corn	Bt	MON 88017	Field trial
2007	Pioneer	Corn	Herculex I	TC 1507	Field trial
2008	Monsanto	Corn	Bt	MON 89034	Field trial
2009	Pioneer	Corn	Herculex I	TC 1507	Semi-Commercial
2010	Pioneer	Corn	Herculex I	TC 1507	Commercial

2010	Monsanto	Corn	Bt	MON 89034	Semi-Commercial
2011	Bayer Cropscience	Rice		LLRice62	Rough rice authorized not for planting only for human consumption
2012	Monsanto	Corn	Bt	MON 89034	Commercial
2013	Monsanto	Corn	Bt	MON 88017	Commercial
2013	Monsanto	Corn	VTPRO	MON 89034 + MON 88017	Commercial
2014	Dow Agroscience	Corn	Power Core	MON 89034 + NK 603 TC 1507	Commercial

Source: SAG's National Service of Food Safety, Plant and Animal Health (SENASA), Seeds Certification Department.

PART C: MARKETING

a) PUBLIC/PRIVATE OPINIONS: There are certain groups that conduct negative campaigns against GE crops. These groups primarily are against transnational companies that manage seeds, agrochemicals, and mining. Please refer to Market Acceptance below.

b) MARKET ACCEPTANCE: Market acceptance related to the sale and use of GE plants and products is favorable. Fruit and vegetable producers that grow for export rotate their crops with GE corn. In this way, the fruit and vegetables exported are free of pesticide residues and pests. Producers who use GE crops see a large increase in yields. The production of GE corn in Honduras creates a sustainable process for farmers.

MARKET STUDIES: Rogelio Trabanino of Zamorano University and Carlos Almendares of the SENASA's Seeds Certification Department wrote the following guidelines that are useful for firms looking at Honduras as an export market for GE crops. Companies requesting a risk evaluation for a test trial or the commercial liberation of a GE product must provide the following information to the Biotechnology and Biosafety Committee:

- Personnel involved: Names, addresses, and telephone numbers of the people that have developed or supplied the event.

- Purpose of the evaluation: Provide a detailed description of the purpose of the introduction of

the event, including the experimental design and/or the proposed production.

- Description of the genetic material: Provide a description of the desired or real characteristic of the modified genetic material. Also include how the characteristic differs from the parent non-modified organism (i.e., morphologic or structural characteristics, activities and physiological processes, number of copies of the material inside of the recipient organism (integrated or extracromosomic) products and secretions and characteristics of growth.

- Transformation methods: Country and place where the parent plant, the receptor organism and the vector were collected, developed and produced. Transformation methods and selection processes employed.

- System used to produce the event*:* Provide a detailed description of the molecular biology of the system that will be used to produce the event (for example: donor-recipient-vector).

- Place of evaluation: Country and geographic location of the evaluation, specifying the exact description of the areas to be evaluated.

- Biosecurity measures: Provide a detailed description of the processes and security measures that have been used or will be used in the country of origin, the countries that will be in transit and in Honduras, to prevent the contamination, liberation and dissemination of the production of the donor organism, the recipient organism and the vector, the constituent of each event and the event.

- Programmed destination: Provide a detailed description of the programmed destination (including the final destination and all the intermediary destinations), uses, and/or distribution of the event (Example: greenhouses, laboratories, or place of the growth chamber, site of the field test, site of the pilot project, production, spreading, manufacturing site, proposed site of sale and distribution).

- Containment measures: Provide a detailed description of the procedures, processes and security measures proposed that will be used to prevent the escape and spreading of the event in each of

the programmed destinations.

- Method of final disposal: Provide a detailed description of the proposed method for the final disposal of the event.

CHAPTER 2: ANIMAL BIOTECHNOLOGY

PART D: PRODUCTION AND TRADE

a) PRODUCT DEVELOPMENT: Not applicable.

b) COMMERCIAL PRODUCTION: Not applicable**.**

c) EXPORTS: Not applicable.

d) IMPORTS: Not applicable.

e) TRADE BARRIERS: Not applicable.

PART E: POLICY

a) REGULATORY FRAMEWORK: Not applicable.

b) INNOVATIVE BIOTECHNOLOGIES: Not applicable.

c) LABELING AND TRACEABILITY: Not applicable.

d) INTELLECTUAL PROPERTY RIGHTS (IPR): Not applicable.

e) INTERNATIONAL TREATIES/FORA: Not applicable.

f) RELATED ISSUES. Not applicable.

PART F: MARKETING

a) PUBLIC/PRIVATE OPINIONS: Not applicable.

b) MARKET ACCEPTANCE/ STUDIES: Not applicable.

Section II. Author Defined: