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Vietnam Agricultural Biotechnology Annual 2013

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Report Highlights:

In 2013 considerable and concrete progress was achieved in the Socialist Republic of Vietnam (GVN)'s development of an agricultural biotechnology regulatory regime. In May 2013, GVN finalized the procedure for granting a bio-safety certificate to an agricultural biotech trait and in September 2013 GVN notified the procedure for granting the food and feed use certificate for an agricultural biotechnology trait to the World Trade Organization's SPS Committee. The food and feed procedure circular will likely be finalized by the end of this year, meaning that the two main pieces of regulation necessary to commercialize agricultural biotechnology in Vietnam will be in place by early 2014.

Section I. Executive Summary:

In 2013, the Socialist Republic of Vietnam (GVN) achieved substantial progress in the development of Vietnam's regulatory structure for agricultural biotechnology. In May 2013, the Ministry of Natural Resources and Environment (MONRE) issued Circular 8/2013/TT-BTNMT on the procedure for granting and revoking Bio-Safety Certificates, paving the way for cultivation of agricultural biotechnology crops in Vietnam. Meanwhile, the Ministry of Agriculture and Rural Development (MARD) is actively working on the Circular for Approval of Genetically Modified (GM) Plants for Use as Food & Feed which is expected to be approved by the end of 2013. MARD notified the Circular to the WTO's SPS Committee on September 2, 2013, and the deadline for comment submission was November 1, 2013. Additionally, MARD is also working on a draft Circular on labeling of biotech products.

Given the considerable progress made this year, the first commercial cultivation of agricultural biotech crops is expected in late 2014 / early 2015, following individual trait approvals. Based on the timeline established in MONRE's Circular 8, MONRE should issue the first Bio-Safety Certificate in the middle of 2014. Similarly, biotech developers expect to obtain the food and feed approval certificate by the middle of 2014.

Chapter 1: Plant Biotechnology

Part A: Production and Trade

a) **Product Development / b) Commercial Production:** Commercial production of agricultural biotech crops and trade in biotech seeds are still not allowed in Vietnam as the regulatory structure to evaluate and approve agricultural biotechnology is still being established. The first commercial cultivation of agricultural biotech crops in Vietnam is expected in late 2014 / early 2015. Currently, agricultural biotech developers have submitted dossiers to MONRE in order to obtain the Bio-Safety Certificate, necessary to commercially grow agricultural biotech in Vietnam. MONRE will review these dossiers in 2014 and will likely begin issuing the Certificates as these reviews are completed.

The Circular on Approval of GM products allowed for use as food/feed will likely be approved by MARD in late 2013. It is anticipated that biotech developers will be granted the certificate for food/feed use in the middle of 2014. Food/feed approval is necessary before commercial cultivation can occur in Vietnam.

- c) Exports: Vietnam does not export GE products.
- **d) Imports:** In 2012, Vietnam's imports of soybean meal and soybeans were estimated at 2.5 million metric tons (MMT) and 1.3 MMT, respectively. Key soybean meal and soybean suppliers to Vietnam include key biotech growing countries, such as Argentina, Brazil and the United States (see VM3018 for more detail).

U.S. distiller's dried grain with soluble (DDGS), have also been used by the Vietnamese feed industry to minimize feed costs. In 2012, Vietnam imported 370 TMT of U.S. DDGS (see VM3016). All DDGS exports from the United States are derived from GE corn varieties.

To meet growing demand of the textile-garment industry, in 2012, Vietnam imported 416 TMT of cotton. The top two cotton suppliers, the United States and India, are GE cotton growing countries

(see VM 3017 for more detail).

e) Food Aid Recipients: Vietnam is not a food aid recipient.

Part B: Policy

a) Regulatory Framework / b) Approvals:

Vietnam's Over-arching Bio-Safety Decree (see VM 2071)

On June 21, 2010, Vietnam's Prime Minister approved the Bio-Safety Decree 69/2010/ND-CP, replacing Vietnam's Bio-Safety Regulation approved in 2005, which was first ever biotech regulation in Vietnam (VM5062). The Bio-Safety Decree provides the legal framework for bio-safety management of genetically modified organisms (GMO), genetic specimens, and products derived from GMOs. This Decree does not regulate pharmaceutical products originating from GMOs. The Decree entered into force August 10, 2010. In order to bring Decree 69 in compliance with provisions on the management of food derived from agricultural biotechnology, regulated under the Vietnam Food Safety Law, in November 2011, Prime Minister Dung signed Decree 108 revising Decree 69 and changing the responsible Ministry for certification for food use from MOH to MARD.

Table 1: Responsibilities of Vietnam's Government Agencies in Management of Bio-Safety as described in Decree 69, and amended by Decree 108

Government Agency	Role	Responsibilities				
Agency Ministry of Natural Resources and Environment (MONRE)	- Acts as lead government agency in Bio-safety Management;	1. To issue Bio-Safety Certificate based on the following conditions: Request from Applicants Results of field trial approved by Ministry of Agricultural and Rural Development (MARD) To publish Applicant's information for public comment (for 30 days). It takes 180 days from the date of receiving applications for processing and issuing of Bio-Safety Certificate 2. To withdraw Bio-Safety Certificate based on following conditions: There is scientific evidence showing that the product is not safe Applicant provides mis-information There is evidence that the approval decision of Bio-Safety Committee was not science based. 3. To develop list of GM products granted Bio-Safety Certificate 4. To develop regulation on storage, package and transportation of GMOs specified in the Article 1 of the Decree.				
		5. To develop and manage database on				

		GMOs				
Ministry of Agricultural and Rural Development (MARD)	To regulate field trial of GM crops. To approve GM products used for animal feed and food (as a result of Decree 108)	1. To issue Permit for Field Trial of GM crops 2. To accredit MARD's agencies for conducting field trial of GM crops 3. To conduct Field Trial of GM crop 4. To approve GM products used for food and animal feed: GM products, that can be approved for use as food and animal feed, must meet the following conditions: a) application must be approved by Bio-Safety Committee for food and animal feed that GM products can be used as food and animal feed and not pose any harm to the environment; b) GM products are approved for food and animal feed in at least five developed countries.				
Formally: Ministry of Health (MOH) now MARD	To approve GM products to use as food NOTE: Decree 108/211 moved Food Certification Authority to MARD					
Ministry of Science and Technology (MOST)	MOST is key government agency to manage research and development of GMOs	 Accreditation of GM research labs Management of GM projects To coordinate with relevant government agencies on developing of labeling regulation 				
Ministry of Industry and Trade (MOIT)		1. To coordinate with relevant ministries including MARD to manage use of GM products as inputs in food processing industries.				

Although the Bio-Safety Decree entered into force on August 10, 2010, regulations outlining the certification process for cultivation, and feed and food use approval are in various stages of development or implementation.

Core GVN Regulations Governing Commercialization of Agricultural Biotechnology

MONRE Biosafety Certification Regulation

On May 16, 2013, the Ministry of Natural Resources and Environment (MONRE) published Circular 8/2013/TT-BTNMT, providing the procedure for granting and revoking Certificates of Biosafety. Circular 8 lays out the regulatory structure to evaluate the biosafety of agricultural traits derived from biotechnology. A biosafety certificate is required before an agricultural biotech event can be commercially cultivated in Vietnam. This Circular entered into force on July 1, 2013 (see VM3042 for more detail).

It is reported that soon after the Circular entered into force, in July 2013, two biotech developers formally submitted the applications for the Bio-Safety Certificate for GE corn varieties to MONRE. If the review timeline follows the timeline proscribed in Circular 8, these two companies expect to

receive Bio-Safety Certificates by the middle of 2014. It is anticipated that the actual MONRE review could take longer than the time proscribed in Circular 8 (180 working days), based on current assessments of progress.

MARD Development of Food/Feed Use Certification Regulation

On September 2, 2013, the draft MARD Circular on the approval of GM plants for use as food and feed was notified to the WTO SPS Committee (*G/SPS/N/VNM/51*). The deadline for comment was November 1, 2013. The USG submitted its comments to Vietnam's Enquiry Point, meeting this deadline. MARD plans to approve the Circular in late 2013. Initially, MARD intended to issue two Circulars; one governing approval for food use, and one governing approval for feed use. However, after reconsidering how two separate approvals would impact commercialization and trade in biotech varieties already commonly used in Vietnam as animal feed and food, MARD decided to issue one Circular approving GE plants for use as both food and feed.

FAS-Vietnam will publish a GAIN Report with an unofficial translation of MARD's Food / Feed Certification Regulation and detailing the approval process proscribed in the Circular once it is finalized.

Additional GVN Regulations Governing Aspects of Agricultural Biotechnology

MONRE Regulation on Supplying, Exchanging Information, and Databases on GMOs On August 22, 2012, MONRE issued Circular 09/2012/TT-BTNMT on the Regulation of Providing and Exchanging Information, and Databases on GMOs. The Circular entered into force on October 8, 2012.

The full Circular in Vietnam can be downloaded from: http://antoansinhhoc.vn/upload/Thong%20tu%2009.2012.TT-BTNMT.pdf

The Circular is applied to government agencies, local individuals, organizations, foreign individuals, and organizations operating activities related to providing or exchanging information, and databases on GMOs (as defined in the regulation).

Information and databases on GMOs include: 1) bilateral or multilateral agreements on Biosafety of GMOs that Vietnam participates in or has already signed; 2) Current regulations on GMOs; 3) Results of research projects and programs on safety of GMOs kept by authorized agencies; 4) Bio-Safety Certificate; Food/Feed Approval Certificates, Permits for Field Trials; Validation of Field Trial results; Decision to Accredit or Revoke Laboratories Qualified for conducting research on GMOs; Decision on which facilities are allowed to conduct GMO field trials; Permit or Decision on Imports of GMOs that are not on the list of GMOs allowed for use as food /feed; 5) Reports as regulated in Appendix I, II, III, IX of Decree 69; and 6) Information on field trial of GMOs; GM crop growing areas, and the list of local/foreign consultants on biosafety- and modern biotechnology and other biotech related information or documents.

GMO databases are grouped into: National GMO database developed and managed the Vietnam Environment Administration (VEA), MONRE; Sectoral GMO databases developed and managed by related ministries; Local GMO databases developed and managed by Provincial/City People's Committees.

MOST Regulation on Guidance to Certify Laboratories Qualified for GMO Research

On October 20, 2012, MOST issued Circular 20/2012/TT-BKHCN regarding the Regulation of the Procedure to Certify a Lab Allowed to Conduct GMO Research. The full Circular in Vietnamese can be found at: http://antoansinhhoc.vn/upload/TT20_2012_BKHCN.PDF.

MOST Regulation on Biosafety Management of GMO Research and Development On November 20, 2012, the Ministry of Science and Technology (MOST) issued Circular 21/2012/TT-BKHCN regulating the Research and Development of Genetically Modified Organisms in Vietnam. The Circular applies to individuals and organizations conducting research and

development of GMOs and genetic specimen activities within Vietnam.

Article 4, Chapter I of Circular 21 regulates the principles of biosafety management for research on GMOs and states that all GMO research must be in compliance with Item 19, Article 20 of the Science and Technology Law (http://antoansinhhoc.vn/Noi-dung/Luat-Khoa-hoc-va-Cong-nghe-sua-doi-2013/2452962); Article 87 of the Environment Protection Law; Article 7 of Bio-Diversity Law (Luât số 20/2008/QH12 - hongchuyen.com | 2452579); and Article 44 and 50 of the Vietnam Food Safety Law (http://antoansinhhoc.vn/Noi-dung/Luat-An-toan-thuc-pham-/2452601). Research on GMOs must be implemented within the framework of science and technology development (project or research topics) approved by relevant competent authorities. All research on GMOs must be carried out in MOST certified laboratories, in accordance with Circular 20/2012/TT-BKHCN.

Please contact FAS-Vietnam if you need further information regarding this Circular. The Circular in Vietnamese can be downloaded from: http://antoansinhhoc.vn/upload/TT21_2012_BKHCN.PDF.

c) Field Testing

MARD Regulation on Field Testing of GM Crops (see VM2071)

On October 27, 2009 MARD issued Circular 69/2009/TT-BNNPTNT outlining the regulatory process for conducting agricultural biotech field trials before commercialization. The Circular covers both confined and multi-location field trials. Circular 69 establishes the criteria to evaluate entities and facilities that wish to conduct biotech field trials. Based on this criterion, MARD has approved the following MARD institutes/agencies to conduct agricultural biotech field trials:

- Agricultural Genetics Institute, and Plant Protection Institute, Vietnam Academy for Agriculture Science (VAAS)
- Northern and Southern New Seed Testing Centers, Crop Production Department
- Nha Ho Cotton Research Institute

MARD also regulates which GE crops are allowed for field trial, and ultimately commercialization, through Circular 72/2009/TT-BNNPTNT dated November 17, 2009. Thus far, only three GE crops namely: Corn (*Zea may L.*), Cotton (*Gossypium spp.*), and Soybean [(*Glycline max (L.) Merrill*] are approved for field testing.

Field Testing: Trials of GE Corn from 2010 – 2013

Based on MARD's permission, the first ever confined field trials of GE corn were launched in two locations, one in the North and one in the South in May 2010. In August 2010, an additional company was granted permission to conduct confined field trials of GE corn. All confined field trials of GE corn were successfully completed in late 2010, and MARD subsequently granted

permission allowing the same biotech developers to conduct multi-location field trials for the same GE corn varieties initially approved by MARD for confined field trials. All multi-location field trials of GE corn were completed in late 2011.

Results of those multi-locations field trials were validated by MARD in the summer of 2013. This was a significant accomplishment, and a prerequisite of the MONRE Bio-Safety Certification process.

Following the initial variety field trials conducted during 2010-2011, biotech developers have gained MARD approval to begin additional field trials for other biotech varieties. In November 2012, MARD granted permission to conduct a confined field trial for another biotech corn variety. This field trial is ongoing.

Additionally, in August 2013, MARD granted a biotech developer another approval to conduct a multi-location field trial for another corn variety. The confined field trial for this variety had been completed and approved by MARD in late 2010.

Although, Vietnamese regulations allow for field trials for three biotech crops (corn, soybeans, and cotton), so far, biotech developers and MARD have only conducted field trials for corn varieties.

- **d) Stacked Event Approvals:** Please see VM3042 for information regarding the regulatory approval process for Stacked Events.
- **f)** Coexistence: There is a small market for certified organic products in Vietnam. However, the market potential for organic products remains very limited due to the low average income level in Vietnam.

g) Labeling

Labeling of GMOs and GM Products (as defined in Decree 69)

MARD is currently in the preliminary stages of drafting a Circular on Labeling of GMO products. FAS-Vietnam will continue to monitor and report on the development of any labeling regulations currently under development.

Currently, both the Food Safety Law and the Bio-Safety Decree have imposed labeling requirements for GMOs, GM food, and GM products. However, the provisions of labeling of GM products in the Food Safety Law and the Bio Safety Decree are not consistent. The Food Safety Law requires labeling only "high risk" GM foods while the Bio Safety Decree requires labeling of all GMOs and products with GM content greater than 5 percent. The two laws also lay out two different agencies to manage labeling requirements. In the Food Safety Law, the Vietnam National Assembly (NA) assigned MARD responsibility for taking the lead and coordinating with Ministry of Science and Technology (MOST) in providing detailed guidelines on the labeling of foods containing GMOs and GM products. While in the Bio Safety Decree, the Ministry of Science and Technology (MOST) is tasked to take the lead in developing guidance to implement the labeling provision. To date, no legal documents guiding how Vietnam will implement the labeling provisions as regulated in the Food Safety Law and the Bio-Safety Decree are available. Post is monitoring developments on this issue

closely.

The following table provides more details on different requirements of labeling of GMOs, GM products in the Food Safety Law and the Bio-Safety Law.

	Vietnam Food Safety Law	Bio Safety Decree 69/2010/ND-CP
Approved date	June 17, 2010	June 21, 2010
Enforce date	July 1, 2011	August 10, 2010
Labeling requirement	Several GM foods that might be harmful to human health.	All GMOs and GM products with content of 5%, or more.
Implementing agency	Vietnam Government is assigned to develop list of high risk GM food for mandatory labeling.	Ministry of Science and Technology (MOST) is working with relevant ministries to develop guideline on labeling of GMOs, GM products.

h) Trade Barriers: As of December 2013, there are no trade barriers in place affecting GE agricultural products.

i) Intellectual Property Rights (IPR)

Intellectual Property Law (IPL) 50/2005/QH11: In principle, Vietnam has a regulatory structure in place to protect the rights of plant variety developers. The IPL provides the foundation for intellectual property rights protection in Vietnam and covers plant varieties, including agricultural biotechnology. The IPL was ratified by the National Assembly (NA) in 2005 and entered into force on July 1, 2006.

The Law consists of six parts and Part Four outlines the rights and protections for plant varieties. Part Four covers the process for obtaining and the rights of Plant Variety protection and consists four chapters (Chapters XII to XV) as follows:

- Chapter XII: Conditions for Protection of Plant Varieties
- Chapter XIII: Establishing the Rights for Plant Varieties
- Chapter XIV: Contents and Limitations of Rights for Plant Varieties
- Chapter XV: Transfer of the Rights to a Plant Variety

Section 2 of Chapter XIII provides details on the applications forms and process to obtain plant variety protection in Vietnam.

As stated in the Article 174, the application must include: a) a registration form using the prescribed form; b) photo and technical questionnaires using the prescribed form; c) letter of authorization if the application form is completed by a representative; d) documents demonstrating the registration right if the registrant has been transferred the right to register the variety; e) documents justifying the claim for prioritization; and f) fee receipt.

Article 176 of the Law outlines the application review process, stipulating that after 15 days from the date of receiving document, the application will be examined by a state competent authority to see if it is qualified for further processing, requires additional information, or should be rejected.

Article 178 outlines the content examination criteria and includes: a) examination for novelty and the denomination; and b) examination of the Technical Test results of the variety. The Technical Test is conducted to determine the Distinctness, Uniformity, and Stability (DUS) of the registered variety. The Technical Test will be done a competent agency or institute assigned by MARD.

As stated in Article 169, the Certificate of Plant Variety Protection is valid for 25 years for trees and grapes; and 20 years for other crops. The Certificate applies for the whole of Vietnam.

The full Law in English can be found at: http://pvpo.mard.gov.vn/DetailInfomation.aspx?InfomationID=IN0000

<u>Government Decree 88/2010/ND-CP:</u> Decree 88 was published on August 16, 2010 and provides additional clarification on aspects of the IPL as it relates to plant variety protection. The full Decree 88 in English is available at: http://pvpo.mard.gov.vn/ImageNews/201308090928Decree_No._88-2010-ND-CP.pdf

The fee for registration for Certificate for Plant Variety Protection is stipulated in the Ministry of Finance's (MOF) <u>Circular 92/2002/TT-BTC</u>, dated October 12, 2002. The full Circular in English is available at: http://pvpo.mard.gov.vn/FileUpload/circular92.pdf.

To implement the IPL and Decree 88, MARD has also issued a number of Circulars. MARD's Circular 56/2007/QĐ-BNN dated June 12, 2007; Decision 103/2007/QD-BNN, dated December 25, 2007; Circular 33 /2009/TT-BNNPTNT dated June 10, 2009; and Circular 11/2013/TT-BNNPTNT dated February 6, 2013 provide the list of plant species protected and designates MARD agencies approved to conduct DUS testing. These decisions and circulars are available at: http://pvpo.mard.gov.vn

On February 28, 2013, MARD issued <u>Circular 16/2013/TT-BNNPTNT</u> which stipulates the Guidelines on Protection of Plant Variety Rights. The Circular guides the implementation of a number of established content rights for plant varieties, representing rights to plant varieties, assessment of plant variety rights and forms of protection of plant varieties.

- **j**) Cartagena Protocol: Vietnam became a member of the Cartagena Protocol in April 2004 and regularly participates in Cartagena Protocol Meetings. As stipulated by the Cartagena Protocol, the Vietnam Environment Administration (VEA) of MONRE is the Cartagena Protocol Focal Point of Vietnam. MONRE has already developed a website: www.antoansinhoc.vn which serves as the clearinghouse for biotech information, regulations, and Certificates issued by MONRE and MARD. Although Vietnam is in the beginning stage of implementing the Cartagena Protocol, the Vietnamese Government actively tries to incorporate requirements and obligations of the Protocol into regulations on bio-safety management.
- **k)** International Treaties/Fora: Vietnam became a member of International Plant Protection Convention in 2005. Also, Vietnam became a member of Codex Alimentarius in 1989. Vietnam Codex Office is under management of Vietnam Food Administration, Ministry of Health: http://codexvn.org.

- **m) Monitoring and Testing:** As of December 2013, Vietnam does not have a monitoring or testing regime in place to evaluate the biotech content in imported and exported of food products or food products domestically produced in Vietnam.
- **n)** Low Level Presence: As of December 2013, Vietnam does not have a policy for Low Level Presence.

PART C: MARKETING

a) Marketing Acceptance / b) Public/Private Opinion: In 2013, anti-biotech campaigns remained active in Vietnam. In addition to un-scientific articles designed to demonize agricultural biotechnology, some parts of the non-governmental organization (NGO) community in Vietnam have organized workshops to disseminate anti-biotech information and criticize the GVN as they develop regulations and issue approvals.

Despite an active anti-biotech campaign, the Vietnamese government actively recognizes the importance of GE crops in the agricultural and manufacturing economy in Vietnam. The Minister of MARD has publicly expressed support for the cultivation of GE agriculture in Vietnam. The livestock, fishery, and textile / garment industries depend heavily on imported materials including soybean, soybean meal, corn, and cotton of which the majority is derived from agricultural biotechnology, and the GVN, led by MARD, clearly understands that necessity.

PART D: CAPACITY BUILDING AND OUTREACH

- a) Activities: During 2012 and 2013, FAS/Vietnam and the U.S. State Department continued to work with relevant Vietnamese agencies including MARD, MONRE, MOIT, MOH, MOST to support the development of the biotech regulatory framework. The following were some of the key activities in that effort:
- **September 23-24, 2013**: Two workshops under the theme "Growing the Future" were held in Hanoi using funding from the State Department. The workshop's participants ranged from senior government regulatory officers and scientists to journalists and students. Significant favorable media coverage was generated.
- **August 12-23, 2013**: Under funding from the U.S. Soybean Export Council, FAS-Vietnam helped to recruit four participants; including two lecturers from Hanoi Agricultural University, one official from the Vietnam Women's Union, and one participant from the Ministry of Industry and Trade to attend a short course titled, "2013 Agricultural Biotechnology Regulation Immersion Course" at the University of Missouri in Columbia, Missouri.
- **August 4-17, 2013:** Under USDA's Cochran Fellowship Program, eight Vietnamese government extension officers representing the National Agricultural Extension Center (NAEC) of MARD and Agricultural Extension Centers of some provinces attended training titled, "How to Educate Farmers about Biotech Crops" in Missouri and Iowa.
- **July 6-20, 2013:** Under USDA's Cochran Fellowship Program, nine Vietnamese journalists working for different agricultural newspapers participated in a short course titled, "Training

Journalists on Benefits Biotechnology" in Tennessee, Missouri, and Iowa.

May 9-14, 2013: In coordination with FAS/Vietnam, the International Food Information Council Foundation (IFCF) conducted a series of Risk Communication Workshops on Agricultural Biotechnology in Hanoi and Ho Chi Minh City, respectively. Participants included regulatory officers and researchers from agricultural institutes and universities. A half-day workshop, titled "Media Workshop on Food Science" was also organized in Hanoi and in HCMC. Targeted participants for these workshops were journalists.

February 15- April 12, 2013: Under USDA's Borlaug Fellowship Program, the Deputy Head of the Department of Molecular Biotechnology Institute of Biotechnology at Can Tho University was selected for a fellowship focused on the "Identification of genetically engineered in foods." He was trained on Rice Breeding and Pathology at the USDA-ARS Dale Bumpers National Rice Research Center (Stuttgart, Arkansas), and on Genetically Modified Plant Identification and Regulation at Monsanto in St. Louis, Missouri.

September 26-29, 2012: FAS-Vietnam received a FAS Emerging Markets Program (EMP) Grant, funding an international expert to visit Vietnam to work with MONRE on the Draft Circular on the procedure to issue the Bio-Safety Certificate.

September 16-20, 2012: FAS-Vietnam provided funding for international airfares to a representative from MARD and a representative from MONRE to attend the 12th International Symposium on the Biosafety of Genetically Modified Organisms (ISBGMO 12) hosted by the International Society for Biosafety Research in St. Louis, Missouri.

August 6-9, 2012: Under funding from State Department and FAS/Hanoi, a series of workshops on Biotech: Growing in Future were held at Can Tho University and Ho Chi Minh City.

April 7-14, 2012: Ten Vietnamese government officials representing MARD, MONRE, and Ministry of Industry and Trade (MOIT) attended State Department's volunteer visitor's program focused on Supporting Agricultural Biotechnology through science-based regulation, conducted in the Washington and Missouri.

b) Strategies and Needs: Vietnamese regulatory Ministries are focused on building the capacity of the individuals on the technical review committees who are evaluating the food / feed use and bio-safety certificate dossiers for the five traits currently submitted for Bio-Safety Certification. Additionally, focus has been placed on outreach to producers and consumers of GE agricultural products on the benefits of agricultural biotechnology.

Chapter 2: Animal Biotechnology

PART E: PRODUCTION AND TRADE

a) **Product Development:** As of November 2013, GVN and MARD do not have legal regulations in place governing the research and development or regulatory approval process for animal biotechnology applications. However, there is some research on gene technology for improving animal productivity, animal disease treatment, and production of vaccine for animals utilizing biotechnology.

b) Commercial Produc	ction:	As there are	no regulati	ions in pla	ce to g	govern	animal	biotech	nology,
there is no commercial j	product	tion in Vietna	am.						

- c) Exports: None.
- d) Imports: None.

PART F: POLICY

- a) Regulation: No regulations cover animal biotechnology.
- b) Labeling and Traceability: None.
- c) Trade Barriers: None.
- d) Intellectual Property Rights (IPR): None.
- e) International Treaties/Fora: None.

PART G: MARKETING

- a) Market Acceptance: Not applicable.
- b) Public/Private Opinions: None at this time.
- c) Market Studies: None.

PART H: CAPACITY BUILDING AND OUTREACH

- a) Activities: None to date.
- b) Strategies and Needs: None at this time.