

USDA Foreign Agricultural Service

GAIN Report

Global Agricultural Information Network

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POLICY

Required Report - public distribution

Date: 11/22/2016

GAIN Report Number:

Ghana

Agricultural Biotechnology Annual

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Report Highlights:

Ghana's National Biosafety Authority remains on track in strengthening its capacity to provide required supervisory services to relevant stakeholders under its watch. An Appeals Tribunal has been established. Guidelines for applications under the law have been approved by the NBA's Board of Directors. A joint commercial release of Bt cowpea with Nigeria is envisaged in 2019.

SECTION I: EXECUTIVE SUMMARY

Food and nutrition security remains a top agenda for the Ghanaian government in the face of increasing consumer demand for imported foods and its attendant rising import bills. Ghana imports food from all over the world to help meet its domestic need. Food is imported from African countries such as Algeria, Cote d'Ivoire, Egypt, Kenya, Morocco and South Africa. Imports from Asia, Australia, Europe, North and South America are also common on the Ghanaian market.

U.S. food exports to Ghana consist primarily of wheat, rice, poultry, and other consumer oriented food products. Trade data from the U.S. Census Bureau showed that the value of U.S. agricultural exports to Ghana in 2015 was \$75.6 million, a decrease in value of about 42 percent as compared to that recorded in 2014 (\$129.4 million). For the second year running, U.S. 2015 exports of prepared food and pet food reached record high of \$4.2 million and \$600,000, which was 104 percent and 47 percent over the 2014 figures for the same products.

To help achieve its goal of national food and nutrition security, biotechnology has been recognized as an invaluable tool by the GOG, and progress is being made, although slowly, especially with regard to plant biotechnology. There is the prospect of a joint commercial release of Bt cowpea with Nigeria within the next three years.

A Memorandum of Understanding (MoU) is expected to be signed between the National Biosafety Authority (NBA) and all the regulatory agencies by the end of November 2016. This will replace the separate bilateral agreements that have been signed between the NBA and each of the regulatory agencies, engendering cooperation. The NBA Board approved the membership of an Appeals Tribunal, and this body will address concerns by the public before any such concern is taken to the high court. Guidelines have been prepared for all applications and are due to be released soon.

Ghana currently imports food products from elsewhere in Africa, Asia, Australia, Europe, South America and the United States that may contain biotechnology elements. There is no discrimination of any sort directed at the existing U.S. agricultural trade interests, namely food exports to Ghana.

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Reference: URL of the National Biosafety Framework Document

Post Contact and Further Information: OAA U.S. Embassy Accra Staff Contacts

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CHAPTER 1: PLANT BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE

a) PRODUCT DEVELOPMENT:

Ghana continues to build its capacity for the development and production of modern agricultural biotechnology crops. There is the prospect of getting Bt cowpea commercialized within the next three years, according to a reliable source. This commercial release of Bt cowpea will be a joint action with neighboring Nigeria.

So far, a total of five applications have been submitted for research on biotech crops in Ghana. These were received by the National Biosafety Committee, which is the predecessor of the National Biosafety Authority. The Crop Research Institute (CRI) submitted applications for Nutrient Enhanced Sweet Potato, and Nitrogen Use Efficient, Water Use Efficient, Salt Tolerant (NUEWUEST) rice or Nitrogen-use Efficient, Water-use Efficient, Salt Tolerant (NEWEST) rice; and the Savanna Agricultural Research Institute (SARI) submitted applications for Bt cowpea, Bt cotton and GM cotton (dual traits).

Trials on Bt cowpea and the NEWEST rice are still on-going but works on Nutrient Enhanced Sweet Potato and GM Cotton have been halted due to limited funding support. Trials on Bt cotton had been put on hold with the commencement of trials on the GM cotton.

b) COMMERCIAL PRODUCTION: There is no commercial production of biotechnology crops.

c) EXPORTS: Not applicable

d) IMPORTS: Ghana does not officially import bioengineered products. Agricultural products such as soybean meal, soybean oil and processed foods are however, freely imported from Argentina, Brazil, the European Union and the United States, which may contain biotechnology elements.

e) FOOD AID: Ghana is presently a recipient of U.S. food aid program, namely Food for Progress. There has not been any barrier that impedes importation of GE food aid.

f) TRADE BARRIERS: Currently, there is no biotechnology-related trade barrier in Ghana.

PART B: POLICY

a) REGULATORY FRAMEWORK:

The GOG established the National Biosafety Committee in 2002 whose mandate was to draft the Biosafety Bill, produce guidelines for the implementation of the Biosafety Law, and to help the GOG to address biotechnology issues. This working committee consisted of officials of government institutions, scientists, farmer organizations, and other stakeholders, and it continuously dialoged with the GOG for the passage of the Biosafety Law. It drafted the Biosafety Bill in 2004 and produced the National Biosafety Framework and Biosafety Guidelines.

A National Biosafety Authority (NBA) has since been established to manage the implementation of the

Ghana Biosafety Act 2011 (Act 831). NBA inaugurated its thirteen-member Board of Directors and filled the Chief Executive Officer's position. A Memorandum of Understanding (MoU) is expected to be signed between the NBA and all the seven regulatory agencies by the end of November 2016. This replaces the separate bilateral agreements that have been signed between the NBA and each of the regulatory agencies: Food and Drugs Authority (FDA); Ghana Standard Authority (GSA); Environmental Protection Agency (EPA); Customs Services; Plant Protection and Regulatory Services Directorate (PPRSD); Veterinary Services Directorate (VSD); and Ministry of Local Government.

This initiative engenders cooperation among the regulatory agencies. The NBA's Board has approved an Appeals Tribunal to address public concerns before issues are taken to the High Court.

i. Responsible Institutions for Implementing the Biosafety Bill (now Law):

The key institutions tasked with the implementation of the Biosafety Law are:

- The National Biosafety Authority (NBA)
- The Technical Advisory Committee (TAC)
- The Regulatory Agencies
- The Institutional Biosafety Committees (IBCs)

NBA is the designated national authority on all issues related to modern agricultural biotechnology in Ghana. All applications, except for contained use and field trials, are submitted to this authority. The governing body of the NBA is a Board whose chairman and members are appointed by the President of Ghana for a period of three years.

The Technical Advisory Committee consists of not more than 11 individuals from the regulatory agencies and the private sector who are knowledgeable in science and socio-economic matters related to biotechnology. TAC is the national advisory committee on matters related to biotechnology, and undertakes risk assessments of applications at the request of the Board. The Ministry of Environment, Science, Technology and Innovation (MESTI) appoints the members based on recommendations by the Board for a period not exceeding five years.

Apart from the GSA and the Ministry of Local Government, the remaining five of the seven regulatory agencies of the Government of Ghana, with the responsibility of monitoring and enforcement are represented on the TAC.

The Institutional Biosafety Committees receive applications, propose measures for laboratory set-up as well as plan release and effectively monitor them. All information/data that needs to be submitted to the National Biosafety Authority will have to go through the IBC, where appropriate. IBC reviews applications for contained use and field trials. The National Biosafety Guidelines suggest two tiers for monitoring and enforcement. Monitoring and inspection is done first by the IBC. This step is pivotal in laboratory work involving Living Modified Organisms (LMOs). The IBC serves, in part, as a conduit for the flow of information between the researchers and the NBA such as forwarding proposals, assessments and recommendations.

ii. Role and membership of the National Biosafety Authority (NBA):

The National Focal Point on Biosafety in Ghana is the Ministry of Environment, Science, Technology

and Innovation (MESTI). MESTI is responsible for liaising with the Secretariat of the Convention on Biological Diversity for the administrative functions required under the Cartagena Protocol on Biosafety. The Biosafety Act established the National Biosafety Authority (NBA), which is interdisciplinary in nature, to process applications relating to biotechnology products specified under the Act.

The NBA ensures adherence to the Cartagena Protocol on Biosafety through implementation of the national biosafety guidelines and other regulations. Additionally, the Act made provision for the NBA's governing board to create a Technical Advisory Committee (TAC). Establishment of an Institutional Biosafety Committee (IBC) was also provided under the Act. The Biosafety Act also provides for issuance of further guidelines to facilitate better performance of the National Biosafety Authority (NBA).

The NBA has the powers as stated under section 39 of the Biosafety Act 2011 (Act 831) to:

- draft and adopt regulations or guidelines to ensure safety of humans and the environment;
- stop a project through the relevant IBC after establishing that further continuation of the project is unsafe to the personnel, community and environment; and
- approve deregulation of all regulated materials for free movement and commercial release on the recommendation of relevant IBCs.

The Act states that a person or organization intending to introduce a bioengineered product into the environment or import or place a bioengineered product on the market must first obtain the written approval of the NBA. Membership of the governing body of the National Biosafety Authority is as follows:

1. An expert in biotechnology and related biological sciences including biosafety, as Chairman;
2. The Chairman of the Technical Advisory Committee;
3. The Chief Director, or the representative of the Ministry of Environment, Science, Technology and Innovation;
4. One representative, Association of Ghanaian Industries (AGI);
5. One legal practitioner of not less than ten years' experience;
6. One representative of non-governmental organizations (NGO);
7. One member from Academia;
8. One member from the Council for Scientific and Industrial Research;
9. One member from the Ministry of Food and Agriculture;
10. One member from Ministry of Health;
11. One member from Food and Drugs Authority
12. Customs Division of the Ghana Revenue Authority;
13. The Chief Executive Officer, National Biosafety Authority.

iii. Assessment of Political Factors:

The Biotechnology and Nuclear Agricultural Research Institute (BNARI) of the Ghana Atomic Energy Commission (GAEC) coordinated the project to draft a Biosafety Framework for Ghana between November 2002 and July 2004. United Nations Environment Programme-Global Environment Facility (UNEP/GEF) provided financial and technical support for the project.

The Framework is unique to Ghana; however, it is modeled after the UNEP/GEF blueprint. The blueprint includes but not limited to; a government policy on biosafety, a regulatory regime, and systems

for public awareness and participation.

Before the Ghana Biosafety Law was passed, the Ghanaian government's position on biotechnology was guided by other principles stated in the National Science and Technology Policy (2000), the Constitution (Art 36, 41), and the Ghana Poverty Reduction Strategy (GPRS) documents. The GOG ratified the Cartagena Protocol on Biosafety in May 2003. The Ghana Biosafety Act 2011 (Act 831) has been passed and is favorable to the use and acceptance of biotechnology.

The “precautionary approach” and the “environmentally sound management of biotechnology” are also factors that were strongly considered in drafting the Framework and Biosafety Act. For example, the Act begins by stating that the first objective is “to ensure, in accordance with the precautionary principle, an adequate level of protection in the field of safe transfer, handling and use of Genetically Modified Organisms (“GMO”) that may have an adverse effect on the environment.”

iv. Distinctions between Regulatory Treatment of Approval:

Approval process under the Ghana Biosafety Act 2011 (Act 831) is the same for food, feed, processing and environmental releases.

v. Reference to Pending Legislations and Regulations:

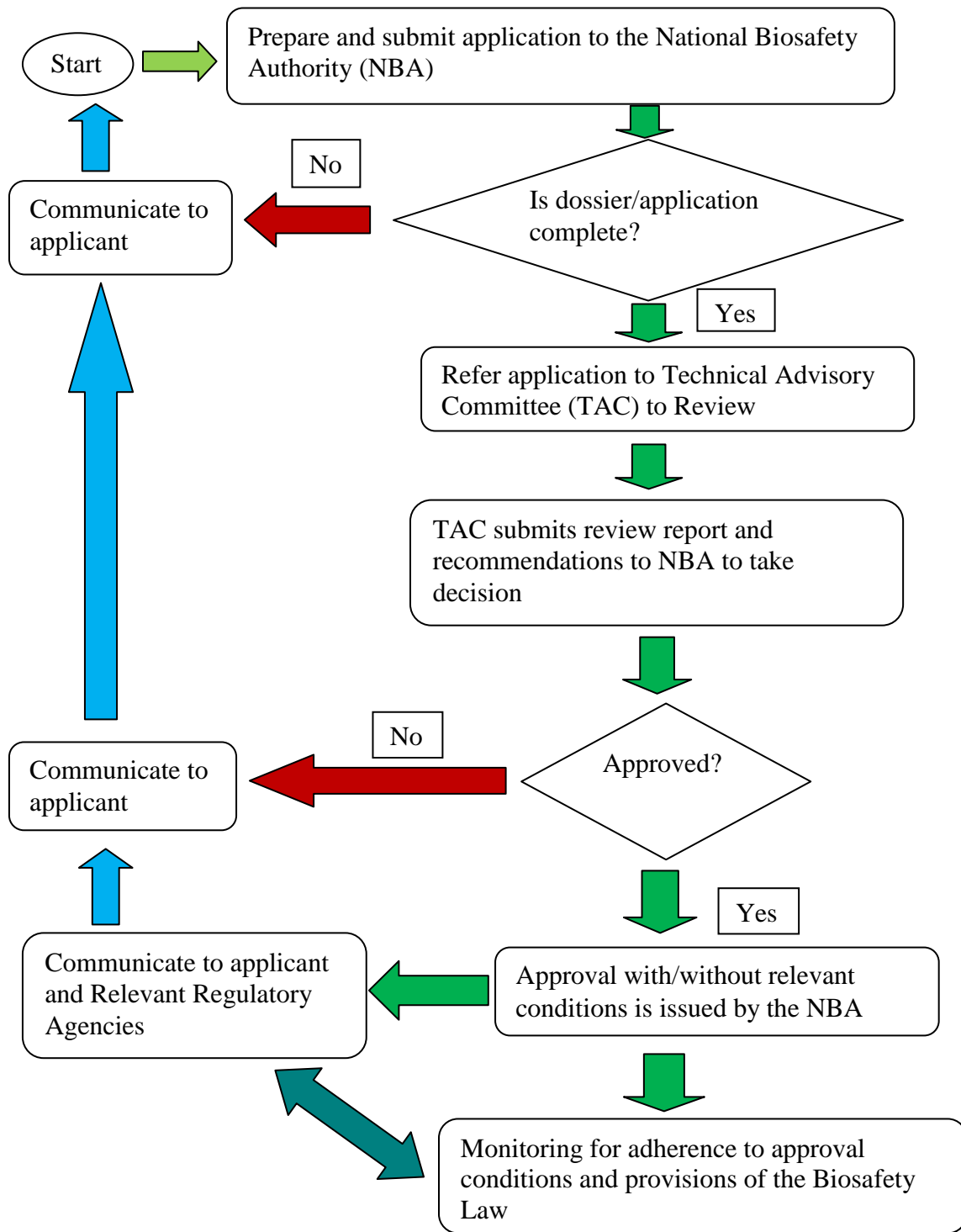
Draft legal instruments have been reviewed and being readied for the Minister to have it submitted to parliament before the end of 2016. Two policies have been drafted to provide needed guidance in decision making: the Variation Policy and the “GMO” Unintended Presence Policy. Guidelines have been prepared for all applications, received approval of the NBA Board in September 2016, and expected be released soon. None of the pending legislations or regulations indicated above is expected to affect trade negatively.

vi. Timeline for Approvals:

The Ghana Biosafety Act 2011 (Act 831) does not contain any timeline for the approval of biotech or bio engineered food products. Timeline for approval is dependent on the application submitted to the NBA.

Below is the flow chart of biosafety application review process in Ghana:

FLOW CHART OF BIOSAFETY APPLICATION REVIEW PROCESS IN GHANA



Source: Ministry of Environment, Science, Technology and Innovation (MESTI)

vii. Regulations on Biosafety: Regulations on the management of biotechnology (Biosafety) in Ghana is yet to receive the approval of cabinet. The NBA is optimistic that approval will be granted in 2017.

b) APPROVALS:

At present, no biotechnology crop (industrial crops, food crops, or feed) has been approved or registered for cultivation, import or export in Ghana.

c) STACKED OR PYRAMIDED EVENT APPROVALS:

The NBA requires additional approval for stacked events. There is also need for review of approval should there be sequencing change regarding an already approved GE trait.

d) FIELD TESTING:

Two field testing exercises are currently underway: the NEWEST rice (by the Crop Research Institute-CRI in the Ashanti Region) and Bt cowpea (by the Savanna Agricultural Research Institute-SARI in the Northern Region). Designated ground for the NEWEST rice's CFT is still under construction, and expected to be completed by end of 2016. The trial has been moved from the on-field site to the on station premises of the research institution due to lack of electricity at the on-field site; lack of accessible road to the site; and last but not least, the long distance between the site and the research station which made monitoring difficult. It was revealed that heightened misconception, fueled by "fear" of possible negative externalities from the GE CFT exercise influenced the decision to site the field far away from the research station.

e) INNOVATIVE BIOTECHNOLOGIES: Unknown

f) COEXISTENCE:

The Ghana Biosafety Act 2011 (Act 831) is silent on co-existence; however, cultivation co-existence with non-GE crops (including organic agriculture) is implied.

g) LABELING:

Although the biosafety legislation does not contain any labeling requirements for biotech or GE food products, or strict liability provisions, labeling is required for packaged foods and feeds in Ghana. And the Food and Drugs Authority's (FDA) General Labeling Rules, 1992, (L. I. 1514) stipulates that food labeling be informative and accurate. Labeling of packaged and prepackaged products is for purposes of health, food safety and need to know. The minimum labeling requirements are that; labeling should be clear, concise and in English.

Labeling should capture product name, net mass/weight, batch number and expiry date. Also, list of ingredients and food additives must be stated. It is mandatory to label any prepackaged food item that has nutritional composition. General labeling regulations for food products are strictly enforced, but they are not specific to biotechnology products. A national threshold regarding GE content is yet to be established, beyond which labelling will be required for products with GE content.

h) MONITORING AND TESTING:

The Ghana Biosafety Act 2011 (Act 831) makes provision for the establishment of a monitoring body for biotechnology products but a monitoring program of genetically engineered food products is yet to be developed. Equipment has been acquired to establish "GMO" detection lab at premises of the Ghana Standard Authority (GSA), and space has been secured at the GSA lab for this purpose. This is envisaged to enhance trade, as a national threshold will be established to control the handling of imports.

Labeling will only be required for products with GE content exceeding the national limit.

i) **LOW LEVEL PRESENCE (LLP) POLICY:**

Not at present but there is the likelihood of having a Low Level Presence Policy in the future.

j) **ADDITIONAL REGULATORY REQUIREMENTS:** There are other existing legislations which apply to GE products indirectly. Table 1: Other Existing Legislations which indirectly apply to “GMOs”, attached as an annex, provides brief description of these regulatory requirements.

k) **INTELLECTUAL PROPERTY RIGHTS (IPR):**

Ghana is a member of the World Intellectual Property Organization (WIPO), the Universal Copyright Convention (UCC) and the African Regional Industrial Property Organization (ARIPO). Manufacturers and traders are strongly advised to patent their inventions and register their trademarks in Ghana, through a patent or trademark agent. Fees for registration vary according to the nature of the patent, but local and foreign applications attract the same rate.

The Ghanaian system for patent and trademark protection is based on British law but in 1992, the patent laws of the United Kingdom ceased to apply in Ghana. Local courts offer redress when infringements occur, though few cases have been filed in recent years. The Copyright Act was passed in 1961, and the Trademark Act in 1965 (amended in 2004). The Copyright Administration in Ghana is responsible for patents, copyright and trademarks. Registration of a trademark allows the holder to have the exclusive right to use the registered mark for a specific product or group of products. Upon approval of a patent, the applicant is given the exclusive right to make, export, import, sell, use a product or apply a patented process.

The Copyright Act of 1965 (amended in 1970 and 2005) makes it a criminal offense to make counterfeit, reproduce, export, import, exhibit, perform, or sell any work without the permission of the copyright owner.

The Biosafety law does not contain any IPR requirements for biotechnology food products. There is currently before the parliament of Ghana a Plant Breeders’ Bill which, when passed into law, will help address intellectual property rights related to plant breeding.

l) **CARTAGENA PROTOCOL RATIFICATION:**

Ghana ratified the Convention on Biological Diversity in August 1994 and the Convention’s Cartagena Protocol on Biosafety on May 30, 2003. As stated in the National Biosafety Framework for Ghana, the Protocol is in consonance with Ghana’s constitutional obligations, environmental law and policy, and the fulfillment of Ghana’s treaty obligations. A law on biosafety has been passed, and regulations are in place. Trade has not been affected in any way.

m) **INTERNATIONAL TREATIES/FORA:** Ghana has taken a pro-biotechnology position and acknowledges biotechnology and nanotechnology as a means of achieving much-needed development under the science, technology and innovation policy.

n) **RELATED ISSUES:** Unknown.

PART C: MARKETING

a) PUBLIC/PRIVATE OPINIONS:

Following the dismissal of the application for injunction on the commercialization and release of Genetically Engineered products in Ghana by the Food Sovereignty Ghana (FSG), an anti-GM group, campaigns against the introduction of biotechnology by anti-GM groups and individuals in Ghana has receded. Please follow the link below for details of this news item:

<http://redirect.state.sbu/?url=http://graphic.com.gh/news/general-news/52478-court-dismisses-injunction-on-commercialising-of-gmos.html>

Several individuals and groups have recently engaged the media on issues related to biotechnology in a bid to send the right information to Ghanaians with regard to its innovation. This has led to a growing interest in having an impartial discussion on the topic of biotechnology across the country.

b) MARKET ACCEPTANCE/STUDIES:

In Ghana, many deliberations on biotechnology are done by the academia, researchers and GOG officials from the relevant ministries. That notwithstanding, producers are eager to resort to GE crops as means of achieving improved productivity. For instance, after observing the results of the Bt and GM cotton trials, farmers were highly impressed that cotton could be produced with only two insecticide applications per production cycle. Producers also note the need to receive the seeds in a timely manner.

Post is not aware of any specific study assessing Ghanaians' acceptance of biotechnology products. That said, Post expects that the Ghanaian producer, importer/retailer and consumer would accept biotechnology inputs and/or products if it guarantees increased yield and income, lower cost of import and handling, and affordable products, respectively. Ghana continues to import food products from all over the world that may contain biotechnology elements.

CHAPTER 2: ANIMAL BIOTECHNOLOGY

This chapter is **not** applicable. To Post's knowledge, there is no reportable information on animal biotechnology in Ghana.

Reference:

National Biosafety Framework Document: <http://www.unep.org/biosafety/files/GHNBfrep.pdf>

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Annex:

Table 1: Other Existing Legislations which indirectly apply to “GMOs”

Title	Status	What does it regulate	Responsible Institution
Plants			
Seed Certification and Inspection Decree (NRCD 100)	Adopted (1972)	Release, Production. Distribution and Use of Plant Materials	Ghana Seed Inspection Division (GSID) of the Plant Protection and Regulatory Services Directorate
Pesticides Control & Management Act (Act 528)	Adopted (1996)	Importation, Exportation, Manufacture, Distribution, Advertisement & Sale of Pesticides	Environmental Protection Agency Plant Protection & Regulatory Services Directorate
Prevention and Control of Pests and Diseases Act of Plants (Act 307)	Adopted (1965)	Prevention and Treatment of Pest Diseases of Plants, Plant Quarantine	Plant Protection & Regulatory Services Directorate
Plant Quarantine Act (<i>To Repeal Act 307</i>)	Draft	Plant Protection (<i>Need for Amendment to Incorporate IPPC Provisions</i>)	Plant Protection & Regulatory Services Directorate
Plant Varieties Bill	Draft (2002)	Breeders Right, Plant Varieties Protection	Registrar-General’s Department
Food			
Food & Drugs Law (PNDCL 305B)	Adopted (1992)	Manufacture, Importation, Exportation, Distribution, Use & Advertisement of foods, drugs, cosmetics, chemicals and Medical Devices	Food & Drugs Authority
Food & Drugs Amendment Act (Act 523)	Adopted (1996)	Fortification of food with Salt (<i>Definition of food expanded to include salt and articles manufacture, sold or represented as food or drink for human</i>)	Food & Drugs Authority

		<i>consumption eg. Chewing gum, water etc)</i>	
Food & Drugs Regulations	Draft (2000)	Packaging & Labeling, Adulteration of Foods, Importation & Exportation, Level of Food Additives	Food & Drugs Authority
Food, Drugs and other Goods – General Labeling Rules (LI 1541)	Adopted (1992)	Labeling	Food & Drugs Authority Ghana Standards Authority
Ghana Standards Decree (NRCD 173)	Adopted (1973)	Promulgation of Standards – any article or commodity or any other matter that may be prescribed including food and food products	Ghana Standards Authority
Fisheries Act (Act 625)	Adopted (2002)	Measures for Conservation, Management, Development, Licensing and Regulation of Fisheries, Aquaculture & Recreational Fisheries	Fisheries Commission
Animals			
Animals (Control of Importation) Ordinance (Cap 247)		Control of Importation of Animals	Veterinary Services Directorate
Diseases of Animals Act (Measures to Control Animal Diseases)	Adopted (1961)	Management of Animal Diseases, Animal Health and Meat Inspection (<i>Need to incorporate OIE standards on Animal Health and Diseases</i>)	Veterinary Services Directorate
Meat Inspection Law (<i>A source of conflict with Local Government Authorities</i>)	Draft (1999) (<i>To ensure compliance with International</i>)	Meat Inspection, labeling, Importation & Exportation of Meat and other animal products	Veterinary Services Directorate

	<i>Standards & Practices)</i>		
Local Government Act (Act 462)	Adopted (1994)	Food Inspection including Meat, Management of Slaughter Houses (Supervision & Control), Supervision, Manufacture & Control foodstuffs & Liquids for human consumption	Metropolitan & District Assemblies (Ministry of Local Government & Rural Development)
Environmental Management (Cross Cutting Applications)			
Environmental Protection Act (Act 490)	Adopted (1994)	Issue of Environmental Permits, Enforcement of Environmental Standards	Environmental Protection Agency
Port Handling and Related Transfer of Commodities (Cross Cutting Applications)			
Exportation & Importation Laws		Port Handling of Commodities (<i>Several LIs to regulate handling of different Commodities</i>)	Customs, Excise & Preventive Services