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Report Highlights:
This report updates the 2017 Agricultural Biotechnology Annual Report. The U.S. exported nearly $1.6 billion in genetically engineered (GE) products to Indonesia in 2017, including nearly $1 billion of soybeans. In August 2018, GE sugar cane completed biosafety assessments for food, feed, and environmental safety. Already having received variety release, the drought resistant sugar cane becomes the first GE crop to meets all defined regulatory requirements, though its unique status will likely prevent broader commercialization.

Section I. Executive Summary:

The United States exported nearly $1.6 billion of genetically engineered (GE) products to Indonesia in 2017, including Bt cotton, herbicide tolerant soybeans and meal, Bt corn, and a variety of food products derived from GE crops.

The Government of Indonesia (GOI) and local universities continue to research a number of GE crops, including virus resistance for tomato, rice, potato and sugar cane. In addition, Indonesian researchers are genotyping Indonesian livestock, including poultry, sheep, Balinese cattle, and fish. Additional research being carried out includes identification of rapid growth and disease resistance in catfish and common carp. Practical applications in Indonesia for GE animals and animal products remain far in the future.

The GOI's overarching policy on agricultural biotechnology is to use science along with the "precautionary approach" on issues surrounding environmental safety, food safety, and/or feed safety. The stated policy is also to take into consideration religion, ethical, socio-cultural, and esthetic norms. As a result of all these considerations, the GOI has issued several regulations and technical guidelines, including recent guides on feed safety (2016) and environmental risk analysis (2017).

To date, ten GE corn varieties, eight GE soybean varieties, three GE sugarcane varieties, and one GE potato variety have undergone risk assessment for either food, feed or environmental safety. Besides a GE corn product, a GE sugar cane product has undergone all three. This GE corn event, however, is delayed in the variety-release process, and will remain delayed until the GOI determines how to implement its "monitoring and control" system required by Government Regulation 21/2005. Having previously received a variety release, the GE sugar cane developed by state-owned PT Perkebunan Nusantara XI (PTPN XI), now stands alone as the first GE crop to meet all existing regulatory requirements for public release. Besides these 22 GE plant varieties, since 2011, GOI has approved a GE structuring protein for human consumption, a GE livestock feed additive, and nine GE vaccines for commercialization.

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CHAPTER 1: PLANT BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE

a) PRODUCT DEVELOPMENT:

Indonesia continues to develop GE crops, albeit at a moderate pace. For example, the Indonesian Institute of Science (LIPI) has completed confined field trials for stem borer resistant rice in four locations and next will submit its environmental safety application to the Ministry of Environmental and Forestry (food and feed safety studies have already been conducted). Unfortunately, due to budget constraints, the submission may only occur in 2020. In addition, LIPI is also researching virus tungro resistant rice, drought tolerant rice, salinity tolerant rice, blast resistant rice, and shelf life extended cassava.

The Ministry of Agriculture's (MOA) Indonesia Center for Agricultural Biotechnology and Genetic Resources (ICABIOGRAD) has conducted confined field trials for virus resistant tomato in four locations. Currently, they are preparing the application for an environmental safety assessment and conducting the food safety study. In addition, they are conducting study on late blight resistant potato for variety registration purposes and plan to conduct confined field trials for their GE nitrogen use efficiency rice. ICABIOGRAD has also started researching Bt rice and genome editing for gemini virus resistant chili, greening disease resistant citrus, and low cadmium absorbent rice.

The University of Jember, in collaboration with a state-owned company, is developing high glucose content sugarcane. Currently the university has applied for environmental safety and food safety of this GE sugarcane. The University of Jember is also conducting research on golden rice (IR36) and will extend this research to include IR64 rice, with the expectation that these crops will be ready for risk assessment in two years. Research on mozaic virus resistant sugar cane at the University of Jember has completed and pending further assessment for possible commercialization.

USAID is funding the development of a GE late blight resistant potato. The potato project is being carried out in a partnership with Michigan State University, the University of Minnesota, University of Idaho, the JR Simplot Company and ICABIOGRAD, and organized under the Feed the Future Biotechnology Partnership Project.

Finally, this year Arcadia Biosciences Inc. which collaborated with MOA, completed their research on evaluating GE nitrogen use efficiency rice. However, there is no available information yet regarding the result of this research. This project was funded under USAID grant. Post/Jakarta sources reported that MOA is planning to continue this research under their own budget.

b) COMMERCIAL PRODUCTION:

The Ministry of Agriculture issued the feed safety certificate for GE drought tolerant sugar cane on August 20, 2018 making it the first GE crop to be eligible for commercial cultivation. However, this

eligibility is particular only to this specific crop, as it had previously obtained variety release and therefore was not required to wait for the establishment of "monitoring guidelines". Nor is the sugar cane truly a commercial release, in the sense of seeds being distributed or sold to farmers who can freely plant, harvest and sell the crops. PTPN XI's sugar cane is currently only grown on lands owned by PTPN XI and the company itself is restricted from selling or distributing the seeds as they lack the proper registration to do so. It is also unlikely they will apply for such registration in the future, as the demand may be relatively limited to specific areas that frequently suffer from draught conditions.

c) EXPORTS:
Indonesia does not export any GE crops to the United States or any other country.

d) IMPORTS:
According to Global Trade Atlas, in 2017, Indonesian imported nearly 2.7 million metric tons of soybeans. United States soybeans account for the vast majority of all soybeans consumed. Soybean consumption in Indonesia is predominantly for human food, with most imported soybeans going to tempeh and tofu production.

As one of the world's largest cotton importers, Indonesia imported 278,000 tons of cotton from the United States in 2016. Brazil and the United States are the largest cotton suppliers to Indonesia.

Indonesia's livestock feed industry relies on imported soybean meal and corn. In 2017, Indonesia imported over four million metric tons of soybean meal. Argentina and Brazil were the primary suppliers. A campaign to increase domestic production and restrict imports for feed use has caused a continuing decline in corn imports to 514,000 tons in 2017. The lack of corn imports has caused a spike in other feed commodities. For example, in 2017 local poultry producers imported over 353,000 tons of corn gluten meal and 625,000 tons of distiller's dried grain and solubles originating primarily from the United States.

Please see GAIN Reports ID1807, ID1808 and ID1810 for more information regarding the trade of soybean, soybean meal, cotton, and corn.

e) FOOD AID:
Indonesia is not a recipient or donor of food aid.

f) TRADE BARRIERS:
Indonesia's regulatory framework continues to stifle the domestic commercialization of GE, despite importing large quantities of GE foods.

PART B: POLICY

a) REGULATORY FRAMEWORK:

The GOI's policy on biotechnology is "accept with a precautionary approach" and use science to assess environmental safety, food safety, and/or feed safety. In addition, the GOI's policy is to consider religion, ethical, socio-cultural, and esthetical norms. Indonesia's regulatory framework to evaluate and approve GE crops was incomplete until August 4, 2016, when MOA issued regulation 36/2016. Regulation 36/2016 established risk assessment guidelines for feed safety, completing the risk assessment framework along with environmental and food safety guidelines. Despite the completion of Indonesia's risk assessment framework, approvals for GE products remain on hold due to MOA's invocation of Government Regulation 21/2005 on the Biosafety of Genetically Engineered Products. This regulation requires that a "monitoring and control" system be implemented in order to regulate approved GE products. The monitoring and control system has yet to be developed.

The Ministers of Environment, Agriculture, Forestry, Marine Affairs and Fisheries, and the Head of BPOM (National Food and Drug Agency) are the authorities responsible for approving and releasing GE products (See Table 1). The Indonesian Council of Ulama (MUI) in 2013, declared that GE food, pharmaceutical, and cosmetic products are halal.

The issuance of Presidential Regulation No. 11/2016 on suspension of nine non-structural institutions, including the National Seed Agency (BBN), caused an obstacle to commercialization of GE food crop and estate crop varieties. This is because BBN had previously authorized the release of all of food and estate crops varieties, including the GE one. Industry sources have indicated that in the interim MOA will form an ad hoc team to take over task of authorizing releases.

For their part, BPOM has revoked three different regulations governing GE food (No. HK.03.1.23.03.12.1563/2012, No. HK.03.1.23.03.12.1564/2012, and No. 19/2016) and compiled them into regulation No. 6/2018 on Supervision of GE Food Products.

Additionally, the Ministry of Environment and Forestry published regulation 69/2016 on procedures for environmental safety testing of GE crops during confined field trials. Other Indonesian laws and regulations related to biotechnology can be seen at the Indonesian Biosafety Clearing House (BCH)'s website.

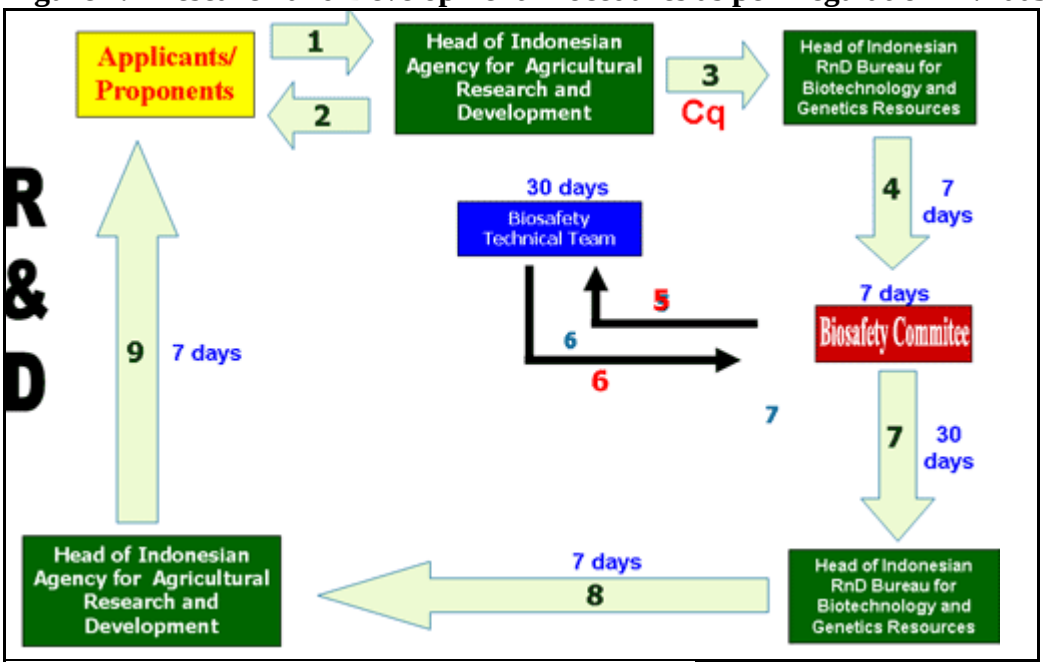
Table 1. The National Competent Authority for GE Products

No.	National Competent Authorities		Responsible for
	Ministry	Office	
1.	Ministry of Environment and Forestry	Directorate General for Conservation of Natural Resources and Ecosystem	Environmental safety
2.	Ministry of Agriculture	Indonesian Agency for Agriculture	Feed safety

		Research and Development	
3.	Ministry of Agriculture	Center for Plant Variety Protection and Agricultural License	Seed imports permit
4.	Ministry of Agriculture	Indonesian Agency for Agriculture Research and Development	Research permit
5.	Ministry of Agriculture	Indonesian Agency for Agriculture Quarantine	Plant and animal imports
6.	National Agency of Drug and Food Control (BPOM)	Division of Processed Food Control	Food safety
7.	Ministry of Marine Affairs and Fisheries	Research Center for Marine and Fisheries Product Processing and Biotechnology	Fisheries products and fish feed
8.	Ministry of Environment and Forestry	Agency of Research, Development, and Innovation	Forestry plants

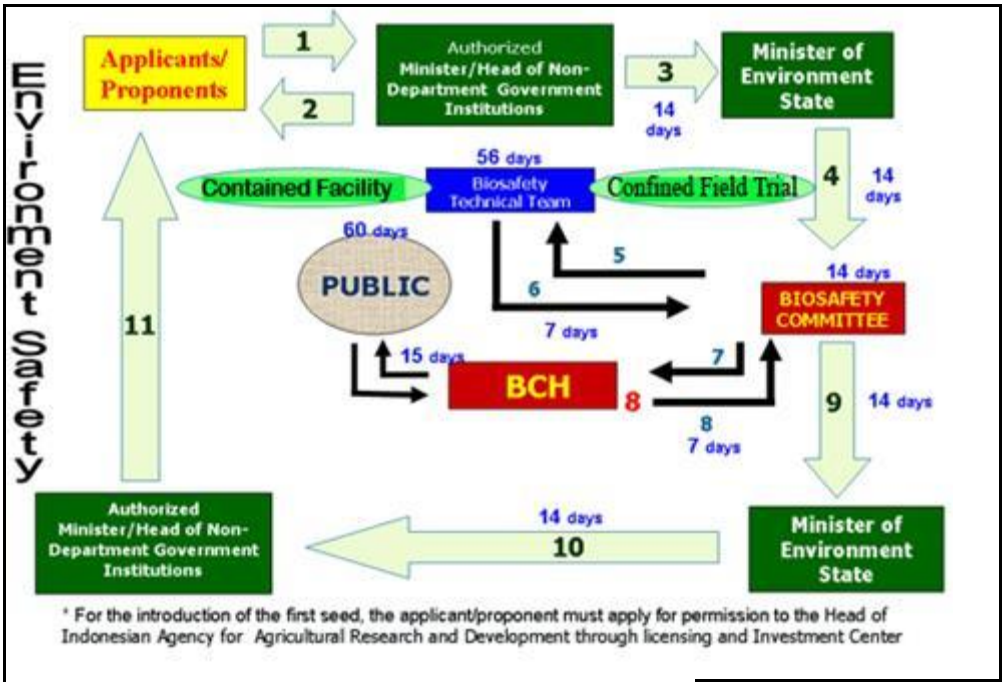
The procedures for the approval of food, feed, processing and environmental releases are described in the diagrams below, as per government regulation No. 21, 2005.

Figure 1. Research and Development Procedures as per Regulation 21/2005



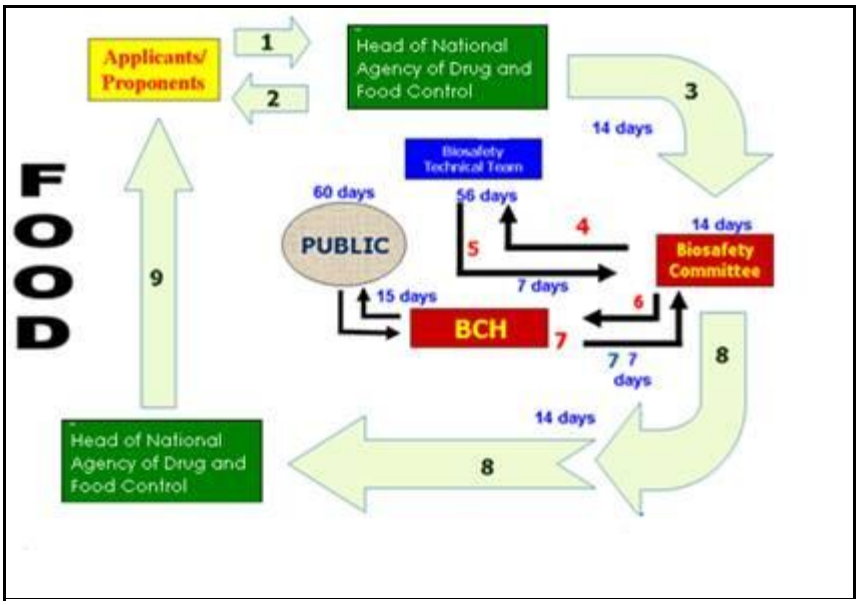
(Source: Indonesia Bio-safety Clearing House, 2010)

Figure 2. Environment Safety Procedures as per Regulation No. 21/2005



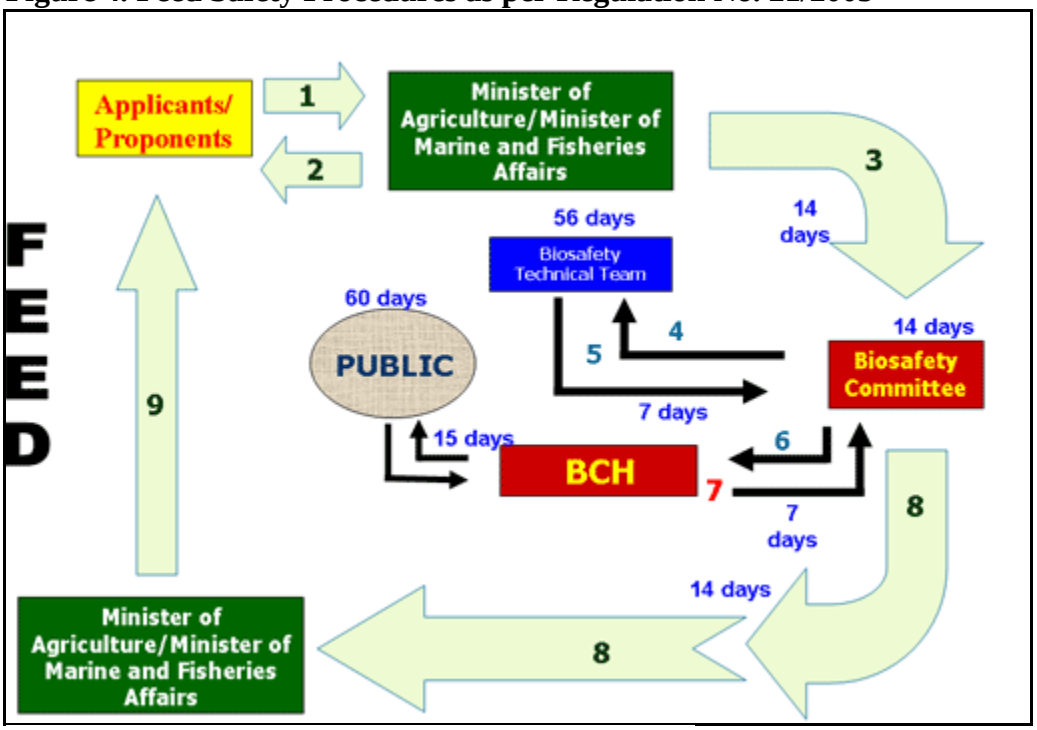
(Source: Indonesia Bio-safety Clearing House, 2010)

Figure 3. Food Safety Procedures as per Regulation 21/2005 and BPOM Regulation HK.03.1.23.03.12.1563/2012



(Source: Indonesia Bio-safety Clearing House (2010) modified by FAS Jakarta, 2012)

Figure 4. Feed Safety Procedures as per Regulation No. 21/2005



(Source: Indonesia Bio-safety Clearing House, 2010)

The National Biosafety Commission on Genetically Engineered Products (BCGEP) is responsible for providing biosafety recommendations, suggestions, and considerations of GE products to the authorized ministries. The BCGEP, established in 2010 and based on Presidential Regulation 39/2010, was inactive until June 2, 2014, when it was reauthorized through Presidential Regulation 53. The reauthorization contained two significant changes. First, the commission was reduced from 21 to 19 members, which will include members of government, the community, and academia. Of the 19 seats, five are newly reserved for members of the Indonesian community at large. Second, academic and community membership is limited to four years with the possibility of one reappointment for an additional term. The current BCGEP members will finish their term on October 19, 2018. Post sources reported that a draft Presidential Decree to appoint new members of BCGEP has been prepared.

Three Technical Teams for Biosafety (TTB) assist the BCGEP in conducting technical assessments and reviews for food, feed and environmental biosafety. The technical team for environmental safety is divided into four groups: plant, animal, fish, and microorganisms. In addition to this team, BCGEP also established the Team of Legal, Economic, Social, and Culture Assessment (TLESCA) in 2012.

b) APPROVALS:

Several GE plants have received food, feed, and/or environmental safety certificates from the GOI. However, due to incomplete biosafety assessments, no imported or locally developed GE plants have yet been commercialized. Please see the table below for the biosafety approved GE products.

Table 3. GE Plants with Environmental, Feed or Food Safety Approvals

No.	Product	Applicant
For Food Safety		
1.	Insect resistant corn event MON 89034	PT. Branita Sandhini
2.	Herbicide tolerant corn event NK 603	PT. Branita Sandhini
3.	Herbicide tolerant soybean event GTS 40-3-2	PT. Branita Sandhini
4.	Herbicide tolerant soybean event MON 89788	PT. Branita Sandhini
5.	Herbicide tolerant corn event GA21	PT. Syngenta Indonesia
6.	Insect resistant corn event MIR 162	PT. Syngenta Indonesia
7.	Insect resistant corn event BT 11	PT. Syngenta Indonesia
8.	Insect resistant corn event MIR 604	PT. Syngenta Indonesia
9.	Corn event 3272 (contained optimal alpha amylase enzyme for ethanol production)	PT. Syngenta Indonesia
10.	Drought tolerant sugarcane event NXI-1T	PT. Perkebunan Nusantara XI
11.	Drought tolerant sugarcane event NXI-4T	PT. Perkebunan Nusantara XI
12.	Drought tolerant sugarcane event NXI-6T	PT. Perkebunan Nusantara XI
13.	Insect resistant soybean event MON 87701	PT. Branita Sandhini
14.	Herbicide tolerant and fatty acid change soybean event MON 87705	PT. Branita Sandhini

15.	Herbicide tolerant and insect resistant corn event TC 1507	PT. DuPont Indonesia
16.	Herbicide tolerant soybean event MON 87708	PT. Branita Sandhini
17.	Higher Nutritional value soybean event MON 87769	PT. Branita Sandhini
18.	Herbicide tolerant corn event MON 87427	PT. Branita Sandhini
19.	Drought tolerant corn event MON 87460	PT. Branita Sandhini
20.	Late blight resistant potato Katahdin event SP951	ICABIOGRAD, Ministry of Agriculture
21.	High oleic acid soybean event 305423	PT DuPont Indonesia
22.	Soybean event SYHT02H2	PT Syngenta Seed Indonesia
For Feed Safety		
1.	Herbicide tolerant corn event NK 603	PT. Branita Sandhini
2.	Insect resistant corn event MON 89034	PT. Branita Sandhini
3.	Drought tolerant sugar cane event NXI-4T	PT. Perkebunan Nusantara XI
For Environmental Safety		
1.	Drought tolerant sugarcane event NXI-1T	PT. Perkebunan Nusantara XI
2.	Drought tolerant sugarcane event NXI-4T	PT. Perkebunan Nusantara XI
3.	Drought tolerant sugarcane event NXI-6T	PT. Perkebunan Nusantara XI
4.	Herbicide tolerant corn event NK 603	PT. Branita Sandhini

Source: Biosafety Clearing House (2017)

Herbicide tolerant corn event NK603 has completed all three risk assessments, but is still waiting to undergo MOA's varietal release approval. Industry sources report that insect resistant corn BT 11 and herbicide tolerant corn GA 21 have already obtained a feed safety recommendation, and late blight resistant potato has received an environmental safety recommendation from BCGEP.

In addition to GE seed products, the GOI has approved a GE protein that is used as a processing aid in ice cream. Please see table below to see other products that have received food, feed, and environmental safety approvals.

Table 4. Non-Crop GE Products with Environmental, Feed or Food Safety Approvals

No.	Product	Applicant
For Food Safety		
1.	Ice Structuring Protein	PT. Unilever Indonesia
For Feed Safety		
1.	Ronozyme AX (CT)	PT. DSM Nutritional Product Indonesia
For Environmental Safety		
1.	GE vaccine Ingelvac Circoflex	Boehringer Ingelheim Indonesia
2.	GE vaccine Vectormune HV NDV + RIspens	PT. Ceva Animal Health Indonesia
3.	GE vaccine Himmvac Dalguban N Plus Oil	PT. Blue Sky Biotech
4.	GE vaccine Himmvac Dalguban BEN Plus Oil	PT. Blue Sky Biotech
5.	GE vaccine Vectormune HVT NDV	PT. Ceva Animal Health Indonesia
6.	GE vaccine Vaxxitek HVT + IBD	PT. Romindo Primavetcom

7.	GE vaccine Nobilis rHVT-ND	PT. Intervet Indonesia
8.	GE vaccine Himmvac Dalguban BN Plus Oil	PT. Blue Sky Biotech
9.	GE vaccine Nobilis rHVT-ILT	PT. Intervet Indonesia

Source: Biosafety Clearing House (2017)

c) STACKED or PYRAMIDED EVENT APPROVALS:
Environmental safety approval for stacked events is similar to single event approval. Such GE crops must undergo laboratory and biosafety containment tests, confined field trial, as well as environmental risk analysis. Although the GOI has not yet decided if the existing food and feed safety approval process for single events can be used for stacked events, BPOM has agreed to receive applications of stacked genes for their food safety assessment.

d) FIELD TESTING:
Limited field trials of GE plant are conducted under Government Regulation No. 21/2005 and the Guideline of Agricultural Biotechnology Products from Genetically Engineering, Series: Plant (2006). The MOA's regulation 61/2011 provides procedures for testing, evaluating, releasing, and withdrawing food crops and estate crops varieties, including GE crops, speeds up the approval process. This regulation also includes aspects of the environmental safety approval process and field trials for GE crops. Under this regulation, limited field trials for the environmental safety assessment can be done in parallel with the adaptation trial for variety release. Furthermore, if the GE crop comes from approved conventional hybrids, the product will not require multi-location field trials and will only require one location field trial from one planting period.

e) INNOVATIVE BIOTECHNOLOGIES:
The GOI has not decided whether the regulations for innovative biotechnologies will follow the regulatory framework of GE products, although some government research institutions have conducted research using gene editing and Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) technology.

f) COEXISTENCE:
Indonesia has no national policy on co-existence.

g) LABELING:
The BPOM issued a regulation on food labeling controls for GE products in March 2012, implementing a 1999 regulation that requires labels and special logos for food containing GE ingredients. According to this regulation, packaged food that contains at least five percent GE products must be labeled with the statement "Food Containing Genetically Engineered Material." The five percent threshold level is measured as the content percentage of Deoxyribo Nucleid Acid (DNA) of GE product against the DNA of non GE product. This 2012 regulation has since been

superceded by regulation No. 6/2018 on Supervising of Genetically Engineered Products. However, there is no change on the procedures of GE product labeling. No food products containing five percent GE materials have been registered to BPOM. As a result, there are no products labelled according to this standard in Indonesia.

h) MONITORING AND TESTING:
MOA is drafting guidelines for a monitoring and control system, as required by Government Regulation No. 21/2005 on Biosafety of Genetically Engineered Products. Post sources report that draft guidelines have been reviewed by BCGEP may be forthcoming.

i) LOW LEVEL PRESENCE POLICY:
Indonesia is a member of the Global Low Level Presence Initiative (GLI), a group of countries that have endorsed the International Statement on LLP and committed to working collaboratively to develop international approaches to manage LLP. Currently Indonesia is drafting a regulation on LLP.

j) ADDITIONAL REGULATORY REQUIREMENTS:
Post is unaware of any additional requirements of GE seeds registration.

k) INTELLECTUAL PROPERTY RIGHTS (IPR):
Law No. 13/2016 on the Patent Act and Law No. 28/2014 on the Copyright Act addresses IPR, providing inventors with exclusive rights. Additionally, Law No. 29/2000 on Plant Variety Protection regulates intellectual property of new plants varieties. The breeder or the plant variety's right holder may use their own plant variety or license others to use it for a specified period. The MOA's Center of Plant Variety Protection and Agricultural License manages new plant variety registration.

l) CARTAGENA PROTOCOL RATIFICATION:
In 2004 Indonesia ratified the Cartagena Protocol through Government Regulation No. 21/2004 concerning Bio-safety to the Convention on Biological Diversity. As a Cartagena Protocol ratification country, Indonesia has:

- assigned the Ministry of Environment as the National Focal Point of the Cartagena Protocol;
- appointed the Ministries to be the National Competent Authority of the Cartagena Protocol;
- published Government Regulation No. 21/2005 concerning the Biosafety of Genetically Engineered Products;
- established the Biosafety Clearing House (BCH)

More details can be found at the Indonesia BCH's website.

m) INTERNATIONAL TREATIES/FORUMS:
Indonesia is a member of the International Plant Protection Convention (IPPC) and the Codex Alimentarius (Codex). However, Indonesia hasn't taken any significant positions pertaining to biotechnology in these forums. Indonesia actively participates in the APEC High Level Policy Dialogue on Agricultural Biotechnology (HLPDAB) and hosted the 2013 APEC annual meeting, including the APEC HLPDAB. In addition, Indonesia has participated in the Global Low-Level Presence (LLP) Initiative forum. BPOM's National Food and Drug Testing Center is Indonesia focal point of ASEAN Genetically Modified Food and Feed (GMFF) Testing Network and is actively involved in its activities.

n) RELATED ISSUES:
In September 2017, the Coordinating Ministry for Economic Affairs issued a draft 2017-2030 roadmap for accelerating biotech product development. This roadmap focuses on five strategic targets: (1) achieving self-sufficiency in rice, corn and soybeans, and increasing sugar production; (2) increasing food diversification; (3) increasing value added and competitiveness of commodities for export and import substitution; (4) supplying bio industry and bioenergy raw materials; and (5) increasing farmers' incomes. The targets for GE seeds development are: 1) increasing availability of GE seeds, especially food crop seeds with traits adapted to conditions in Indonesia; 2) protecting and using national genetic resources to develop seed varieties; 3) guaranteeing environmental safety, food safety and feed safety of GE seed varieties; 4) fulfilling private/industrial sector involvement in supplying GE seeds. In terms of specific actions, the roadmap specifies the following activities: 1) strengthening research on various characteristics of GE seeds; 2) providing financial support for the biosafety assessment submissions of government research institutes/universities; 3) maintaining and protecting genetic resources; 4) utilizing superior properties of genetic resources; 5) strengthening system and legislation in biosafety assessment of GE products; 6) strengthening the institutions of biosafety assessment and examination of GE products; 7) strengthening partnership cooperation between private and public sector GE seed research and development; 8) providing incentives and facilities for industry actively engaged in GE seed research and development.

PART C: MARKETING

a. PUBLIC/PRIVATE OPINIONS:
Several Indonesian non-governmental organizations (NGOs) occasionally oppose the production and use of GE plants, although their intended targets are usually multi-national companies behind the technology.

Modeled on the success of the Biotechnology Coalition of the Philippines, a pro-biotech advocacy association, the Society of Indonesian Agricultural Biotechnology (previously named the Indonesian Coalition on Agricultural Biotechnology [ICAB] was formed in Lombok, West Nusa Tenggara on July 4, 2012, during the 5th Indonesia Biotechnology Conference for supporting the adoption of agricultural biotechnology in Indonesia. More information regarding ICAB can be seen at GAIN Report ID1226. In addition, the Indonesian farmer association KTNA has stated their strong support

for planting GE crops, as they believe the technology can greatly improve the livelihoods of their families.

b) MARKET ACCEPTANCE/STUDIES:
Indonesian farmers are open to using new technologies including biotechnology. There is broad support for the technology from farmer organizations.

Due to a lack of information and general knowledge about biotechnology, consumers are more hesitant if they know their food contains GE products. Nonetheless, Indonesians have widely consumed GE soybean derived tempeh and tofu for the last three decades.

CHAPTER 2: ANIMAL BIOTECHNOLOGY

PART D: PRODUCTION AND TRADE

a. PRODUCT DEVELOPMENT:
Some research institutions and local universities have reportedly conducted studies on molecular markers. This includes genetic research on local rhinos, cows, bulls, and chickens using gene markers, identification of animal characteristics to heat tolerance and feed utilization, poultry resistance to Newcastle disease, and characteristics of rapid growth and disease resistance in common carp and catfish. This research is far from commercial release. In addition, research on cloning using simple splitting techniques and somatic cell transfer methods has been done, though to date the results have yielded no significant reports or product development.

b) COMMERCIAL PRODUCTION:
There is no commercial production of GE animals or cloned animals in Indonesia.

c) EXPORTS:
Not applicable

d) IMPORTS:
Not applicable

e) TRADE BARRIERS:
Not applicable

PART E: POLICY

a. REGULATORY FRAMEWORK:
Regulatory framework of GE animals, including cloning, is similar to GE crops, although there are no specific guidelines for assessing and approving of GE animals. Please refer to regulatory framework of Part B: Policy section of Plant Biotechnology for more details.

b) APPROVALS
In 2011 the GOI accepted a GE livestock feed additive for their feed safety. In addition, since 2015 the GOI has reviewed and approved environmental safety of nine GE vaccines for poultry diseases. There are no approvals for the commercial or research use of GE animals.

c) INNOVATIVE BIOTECHNOLOGIES:
Not applicable

d) LABELING AND TRACEABILITY:
Not applicable

e) INTELLECTUAL PROPERTY RIGHTS (IPR):
Similar to crops, IPR for animal production will follow Law 13/2016 on the Patent Act and Law 28/2014 on the Copyright Act.

f) INTERNATIONAL TREATIES/FORUMS:
Indonesia is a member of the Codex Alimentarius (Codex), World Organization of Animal Health (OIE), APEC High-Level Policy Dialog on Agricultural Biotechnology and frequently send their officials to the forums.

g) RELATED ISSUES:
Not applicable

PART F: MARKETING

a. PUBLIC/PRIVATE OPINIONS:
Public and Private sentiment regarding GE or cloned animals is not well-established.

b) MARKET ACCEPTANCE/STUDIES:

Currently there are no studies on market acceptance of cloned or GE animals. It can be expected that Indonesian consumers will demonstrate the same or stronger hesitancy towards GE or cloned animals as they currently do towards other GE products.