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**Report Highlights:**

On March 8, 2020, the Hashemite Kingdom of Jordan’s cabinet of ministers approved the regulation, “Instructions for Handling Food and Food Products Originating from Genetically Modified Substances Produced by Modern Biotechnology for 2018, based on Article 8.B of Food Law No. 30/2015 and Article 7.K of Law of Food and Drug General Administration No. 41/2008,” and subsequently published in Jordan’s official gazette on April 3, 2020. The new regulation supports the free movement and import clearance of food and agricultural products, while protecting consumer choice. The country continues to have no clear agricultural biotechnology framework. It has yet to establish an implementing regulation covering the trade in living modified organisms (LMOs); it lacks a notification mechanism. A new section on microbial biotechnology has been added to the report.

## *EXECUTIVE SUMMARY*

On March 8, 2020, the Hashemite Kingdom of Jordan's cabinet of ministers approved the regulation, "Instructions for Handling Food and Food Products Originating from Genetically Modified Substances Produced by Modern Biotechnology for 2018, based on Article 8.B of Food Law No. 30/2015 and Article 7.K of Law of Food and Drug General Administration No. 41/2008," and subsequently published in Jordan's official gazette on April 3, 2020. The new regulation supports the free movement and import clearance of food and agricultural products, while protecting consumer choice.

In 2016, Jordan's Ministry of the Environment enacted a biosafety law based on the Cartagena Biosafety Protocol. Jordan, however, lacks a clear agricultural biotechnology framework. Jordan does not yet have a legal implementing regulation covering the trade in living modified organisms (LMOs), nor a notification mechanism in place.

Jordan is 95 percent dependent on food imports. It is unable to produce agricultural commodities in sufficient volumes to meet domestic food demand needs. Any disruption to imports potentially poses a food security risk. Jordan imports roughly \$250 million annually of genetically engineered (GE) products from various origins; often unlabeled as "containing" or "may contain GE ingredients."

Jordan's dairy and poultry sectors, the country's largest agribusinesses, are dependent on imported soybeans and soybean meal, as well as on corn and distillers' dried grains with solubles (DDGS). These industries are completely reliant on imports to meet their feed requirements. In calendar year (CY) 2019 (January-December), Jordan imported from all sources 366,000 metric tons (MT) of soybean meal, most of it from Argentina, DDGS (exclusively from the United States), and 446,000 MT of corn (mainly from Brazil), most of which are genetically engineered. Without access to global markets for feedstuff, the dairy and poultry sectors' production would not be commercially feasible, nor sustainable.

The food industry has mixed views about biotechnology's risks and benefits. Jordan's dairy and poultry sectors support biotechnology. The country's high-value fruit and vegetable producers, seeking to export to more affluent European markets aim to be perceived as being GE-free. These export-focused producers oppose the introduction of any GE crops. Jordanian consumers often hear from anti-GE activist groups, but opponents of the technology have not obtained meaningful support in this price sensitive market.

The United States and Jordan benefit from their extensive economic partnership. A key element of this relationship is the [United States-Jordan Free Trade Agreement](#), fully implemented on January 1, 2010.

Jordan has no GE animals in development, nor is there approved GE animal production. The biosafety law covers GE animals, but lacks an implementing regulation. The Ministry of Environment counts with a bylaw to administer the trade in GE animals, but not for their development (Biosafety Law No. 2009 based on Environment Law No. 52/3006). There is no regulatory policy for the use of innovative biotechnologies such as genome editing using ZFNs, TALENs, and CRISPR/Cas9 in animals.

FAS Amman is unaware of Jordan commercially producing food ingredients derived from microbial biotechnology, nor of it exporting food ingredients derived from microbial biotechnology. Currently, there are no known trade barriers regarding food ingredients derived from microbial biotechnology.

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## CHAPTER 1: PLANT BIOTECHNOLOGY

### PART A: PRODUCTION AND TRADE

- a. **PRODUCT DEVELOPMENT:** Despite incipient efforts by university researchers, there is no product development of genetically engineered (GE) crops in Jordan. University researchers are keen to take the lead in introducing GE applications in Jordan; they seek to reduce the excessive use of pesticides and address abiotic stresses such as extreme heat, drought, and salinity.
- b. **COMMERCIAL PRODUCTION:** Jordan has no commercial GE crop production.
- c. **EXPORTS:** Jordan does not export commodities or products derived from agricultural biotechnology.
- d. **IMPORTS:** Jordan has not authorized the commercial cultivation of GE crops. It does, however, rely extensively on imports of food and agricultural products derived through GE (e.g., soybean meal, corn, and processed foods). Imports of processed food products, including cereals, snack foods, and oils, may contain GE ingredients.

Jordan's dairy and poultry sectors, the country's largest agribusinesses, are dependent on imported soybeans and soybean meal, as well as on corn and distillers' dried grains with solubles (DDGS). These industries are completely reliant on imports to meet their feed requirements. In calendar year (CY) 2019 (January-December), Jordan imported from all sources 366,000 metric tons (MT) of soybean meal, most of it from Argentina, DDGS (exclusively from the United States), and 446,000 MT of corn (mainly from Brazil), most of which are genetically engineered.

Without access to global markets for feedstuff, the dairy and poultry sectors' production would not be commercially feasible, nor sustainable. Approximately 98 percent of Jordan's soybean meal imports originate in Argentina, where the share of GE soybean reportedly accounts for almost 100 percent of production. Similarly, Argentine and Brazilian corn are respectively 97 and 89 percent derived from genetic engineering.

Since April 2020, the Jordan Food and Drug Administration (FDA) has ceased confiscating and destroying imported (including U.S.-origin) consumer-oriented food products labeled as "containing" or "may contain components derived from genetic engineering."

The United States and Jordan benefit from their extensive economic partnership. A key element of this relationship is the [United States-Jordan Free Trade Agreement](#), fully implemented on January 1, 2010.

- e. **FOOD AID:** Jordan is a food aid recipient; it does not restrict the use of GE commodities. In 2012, 2015 and 2017 Jordan received food aid of U.S. wheat (which is not genetically engineered). (see, [GAIN-JORDAN - Sept. 14, 2017 – Jordan Welcomes USDA/FAS Food for Progress 50,000 MT Wheat Shipment](#) and [GAIN-JORDAN – March 8, 2018 – Food for Progress](#))

Program for Jordan Update: The al-Karak Dam begins to Benefit Jordanian Farmers at <https://gain.fas.usda.gov/#/search>).

- f. **TRADE BARRIERS:** There are no biotechnology issues or barriers impeding U.S.-bulk products. Jordan’s new GE food labeling regulation nullifies older administrative directives that were used to ban the import of food products labeled as containing GE ingredients or components. Importers of products labeled as “may contain GE ingredients” have not reported any issue since the new 2020 regulation.

## ***PART B: POLICY***

- a. **REGULATORY FRAMEWORK:** In 2016, Jordan’s Ministry of the Environment enacted a biosafety law based on the Cartagena Biosafety Protocol. Jordan, however, lacks a clear agricultural biotechnology framework. Jordan does not have legal implementing regulations for the biosafety law covering the trade in living modified organisms (LMO), nor a notification mechanism in place. There are no known provisions for cultivation or research in place.
- b. **APPROVALS:** Jordan’s Ministry of the Environment enacted a biosafety law in 2016 regulating agricultural products derived from biotechnology. Until the implementing regulation is in place, products cannot be submitted for approval.
- c. **STACKED or PYRAMIDED EVENT APPROVALS:** Jordan has not yet considered this issue. It is unclear if the evaluation of stacks will occur separately via the same process as single gene traits.
- d. **FIELD TESTING:** There are no GE field trials in Jordan. The country’s lack of a science-based biosafety regulation impedes the approval mechanism for field tests. Jordan does not grow GE crops such as soybeans and cotton. Corn production is not significant and is limited to plantings of conventional seed.
- e. **INNOVATIVE BIOTECHNOLOGIES:** There is no regulatory policy for innovative biotechnologies such as genome editing using ZFNs, TALENs, and CRISPR/Cas9.
- f. **COEXISTENCE:** Jordan does not have a policy on coexistence between GE crops and conventional crops.
- g. **LABELING AND TRACEABILITY:** On March 8, 2020, the Hashemite Kingdom of Jordan’s cabinet of ministers approved the regulation, “Instructions for Handling Food and Food Products Originating from Genetically Modified Substances Produced by Modern Biotechnology for 2018, based on Article 8.B of Food Law No. 30/2015 and Article 7.K of Law of Food and Drug General Administration No. 41/2008,” and subsequently published in Jordan’s official gazette on April 3, 2020. The new regulation supports the free movement and import clearance of food and agricultural products, while protecting consumer choice (see [GAIN-JORDAN - JO2020-0005 - Jordan Issues Instructions for Handling of GE Derived Food and Food Products at https://gain.fas.usda.gov/#/search](https://gain.fas.usda.gov/#/search)).

- h. MONITORING AND TESTING:** There is no formally enacted system for GE monitoring and/or testing. It is uncertain whether Jordan has the capacity to effectively, and reliably, test for GE ingredient content.
- i. LOW LEVEL PRESENCE POLICY:** Jordan has no low-level presence policy.
- j. ADDITIONAL REGULATORY REQUIREMENTS:** None.
- k. INTELLECTUAL PROPERTY RIGHTS (IPR):** Jordan adopted Plant Variety Protection Law in 2004. The Law meets the WTO's TRIPS Section 5 Article 27 (3.b), providing for the protection of plant varieties by an effective *sui generis* system.
- l. CARTAGENA PROTOCOL RATIFICATION:** Jordan is a signatory to the Cartagena Protocol on Biosafety, a supplement to the Convention on Biological Diversity. In 2016, Jordan's Ministry of the Environment enacted a biosafety law based on the Cartagena Biosafety Protocol. Jordan, however, lacks a clear agricultural biotechnology framework. Jordan does not yet have a legal implementing regulation covering the trade in living modified organisms, nor a notification mechanism in place. The draft implementing regulation would implement the protocol's provisions on trade of living modified organisms.
- m. INTERNATIONAL TREATIES/FORUMS:** Jordan ratified the Convention on Biological Diversity and Kyoto and Montreal protocols. It is a member of the International Plant Protection Convention, the World Trade Organization, and of the *Codex Alimentarius*. It does not actively participate in discussions related to GE plants within these international organizations.
- n. RELATED ISSUES:** None.

### ***PART C: MARKETING***

- a. PUBLIC/PRIVATE OPINIONS:** The public sector views on biotechnology are inconsistent. The Ministry of the Environment has enacted a biosafety law that will require the labeling of biotech products. The Ministry of Agriculture, however, realizes that it would be a costly and an erroneous proposition. The dairy and poultry sectors, Jordan's largest agribusinesses, are dependent on imported feedstuff mainly derived from genetic engineering. The Jordan FDA at the same time aims to take sole oversight of GE food products, premising its actions on unsubstantiated food safety concerns.
- b. MARKET ACCEPTANCE/STUDIES:** Market acceptance of GE products is controversial. Anti-biotech campaigns are very active on social media. These generate misconceptions, and often make unsubstantiated claims about the potential health risks associated with the consumption of food products derived from genetic engineering. Jordan is dependent on food imports from global markets; any disruption to trade potentially poses a food security risk.

The food industry has mixed views about biotechnology's risks and benefits. Jordan's dairy and poultry sectors hold favorable views of biotechnology. However, the country's export sector,

mainly fruit and vegetable exporters, wish to be perceived as GE-free to appease more affluent European export destinations. Export-focused producers oppose the introduction of any GE crops. The general consumer hears from anti-GE activist groups, but these have yet to garner significant momentum in a price-sensitive market.

There are no marketing studies on GE plants.

## ***CHAPTER 2: ANIMAL BIOTECHNOLOGY***

### ***PART D: PRODUCTION AND TRADE***

- a. PRODUCT DEVELOPMENT:** No genetically engineered (GE) animals are in development.
- b. COMMERCIAL PRODUCTION:** There is no approved GE animal production.
- c. EXPORTS:** None.
- d. IMPORTS:** Jordan does not import GE animals or livestock clones, or products derived from these animals, including genetics.
- e. TRADE BARRIERS:** Same as those associated with plant biotechnology.

### ***PART E: POLICY***

- a. REGULATORY FRAMEWORK:** Jordan's biosafety law covers GE animals, but it lacks an implementing regulation. There are no regulations in place for animal cloning. The Ministry of Environment counts with a bylaw to administer the trade in GE animals, but not for their development (Biosafety Law No. 2009 based on Environment Law No. 52/3006).
- b. INNOVATIVE BIOTECHNOLOGIES:** Jordan has no regulatory policy for the use of innovative biotechnologies such as genome editing using ZFNs, TALENs, and CRISPR/Cas9 in animals.
- c. LABELING AND TRACEABILITY:** Same as with plant biotechnology.
- d. INTELLECTUAL PROPERTY RIGHTS (IPR):** Currently undetermined.
- e. INTERNATIONAL TREATIES and FORUMS:** Jordan is a member of the Food and Agriculture Organization (FAO) and *Codex Alimentarius*. Jordan follows World Organization for Animal Health (OIE) standards and protocols for live animal and beef product imports. It does not support the production of GE animals. It does not actively participate in discussions related to animal biotechnologies, including cloning, within international organizations.
- f. RELATED ISSUES:** None.

### ***PART F: MARKETING***

- a. PUBLIC/PRIVATE OPINIONS:** There is skepticism about biotechnology's benefits.
- b. MARKET ACCEPTANCE/STUDIES:** No known information exists on market acceptance or public opinion studies regarding GE animals or cloning.

## ***CHAPTER 3: MICROBIAL BIOTECHNOLOGY***

### ***PART G: PRODUCTION AND TRADE***

- a) **COMMERCIAL PRODUCTION:** FAS Amman is unaware of Jordan commercially producing food ingredients derived from microbial biotechnology.
- b) **EXPORTS:** FAS Amman is unaware of Jordan exporting food ingredients derived from microbial biotechnology.
- c) **IMPORTS:** FAS Amman is unaware of Jordan specifically prohibiting the import of food ingredients derived from microbial biotechnology.
- d) **TRADE BARRIERS:** Currently, there are no known trade barriers regarding food ingredients derived from microbial biotechnology.

### ***PART H: POLICY***

- a) **REGULATORY FRAMEWORK:** There is no regulatory policy for microbial biotechnology-derived food ingredients.
- b) **APPROVALS:** None.
- c) **LABELING AND TRACEABILITY:** [see Chapter 1, Part B: POLICY g) LABELING AND TRACABILITY].
- d) **MONITORING AND TESTING:** There is no formally enacted system for GE monitoring and/or testing. It is uncertain whether Jordan has the capacity to effectively, and reliably, test for GE ingredient content.
- e) **ADDITIONAL REGULATORY REQUIREMENTS:** None.
- f) **INTELLECTUAL PROPERTY RIGHTS:** Jordan adopted Plant Variety Protection Law in 2004. The Law meets the WTO's TRIPS Section 5 Article 27 (3.b), providing for the protection of plant varieties by an effective sui generis system.
- g) **RELATED ISSUES:** None.

### ***PART F: MARKETING***

- a) **PUBLIC/PRIVATE OPINIONS:** There is no research on how the public perceives the use of microbial biotechnology. The public attitude towards research institutions that use microbial biotechnology for food ingredient or nutritional purposes is undetermined.
- b) **MARKET ACCEPTANCE/STUDIES:** No studies have been conducted.

**Attachments:**

No Attachments