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**Report Highlights:**

The country continues to have no clear agricultural biotechnology framework. There is a biosafety law without an implantation regulation. 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," which was 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. It has yet to establish an implementing regulation covering trade in genetically engineered (GE) products; and it lacks a notification mechanism.

## *EXECUTIVE SUMMARY*

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.

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.

Jordan is a net food import country; 95 percent of food is imported. Due to lack of water resources, 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 1.5 million tons of corn and soybean; most of genetically engineered (GE) origin, roughly a \$250 million annually GE products from various origins.

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 marketing year (MY) 2021 (Starts October 2020), Jordan imported from all sources 870,000 MT of corn and half the amount soybeans meal (mainly from Argentina and 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. 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.

Jordan has no GE animals in development, nor is there approved GE animal production. Jordan's biosafety law covers GE animals but lacks an implementing regulation.

Jordan has no regulatory policy for the use of innovative biotechnologies such as genome editing using ZFNs, TALENs, and CRISPR/Cas9 in plants or 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.

The dairy and poultry sectors' production would not be commercially feasible, nor sustainable without access to global markets for feedstuff. 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.

JFDA is repeatedly reported to cease, confiscating and destroying imported U.S. origin consumer-oriented food products labeled as "containing" or "may contain components derived from genetic engineering."

- e. **FOOD AID:** Jordan is a food aid recipient; it does not restrict the use of GE commodities. Jordan has not received food aid of U.S. wheat since 2017 (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>).

**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” according to new 2020 regulation can register; in advance, their products at JFDA and facilitate the imports.

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

- a. **REGULATORY FRAMEWORK:** In 2016, Jordan’s Ministry of the Environment enacted the biosafety law based on the Cartagena Biosafety Protocol. Jordan, however, lacks a clear agricultural biotechnology framework. For more information see Chapter 1, Part B, section L.
- 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.
- 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>).
- 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 (LMOs)" as defined in the Protocol, nor a notification mechanism in place. The draft implementing regulation would implement the protocol's provisions on trade of "LMOs".

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*. Jordan does not take a strong position on use of agricultural biotechnology, and does not actively participate in discussions related to GE plants within these international organizations.

n. **RELATED ISSUES:** None.

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

k. **ADDITIONAL REGULATORY REQUIREMENTS:** None.

l. **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.

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o. **RELATED ISSUES:** None.

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

a. **PUBLIC/PRIVATE OPINIONS:** The public sector's views on biotechnology are inconsistent. 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. On other hand the Ministry of the Environment has enacted a 2016 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***

**REGULATORY FRAMEWORK:** Jordan's biosafety law covers GE animals, but it lacks an implementing regulation. There are no regulations in place for animal cloning.

- b. **APPROVALS/AUTHORIZATIONS:** Not applicable.

c.

**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. **ADDITIONAL REGULATORY REQUIREMENTS:** None.
- 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 the 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. It would apply to microbes, yet no precedence.
- 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