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Jordan's Biotech Regulations Remain Largely Unchanged

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Report Highlights:

There is no genetically-engineered (GE) crop production in Jordan. The country continues to allow the import of GE products that are approved for use in the country-of-origin and are authorized for export. The Ministry of the Environment has drafted a biosafety law based on the Cartagena Protocol on Biosafety to the Convention on Biological Diversity; the bill is pending parliamentary ratification. The current version of the biosafety law, if enacted, will require the labeling of biotech products. The Ministry of Agriculture reportedly has raised concerns that enactment of biosafety law in its current form will adversely impact the poultry and dairy sectors (Jordan's largest agribusinesses); both are dependent on imported (predominantly biotech) feed grains.

EXECUTIVE SUMMARY

There is currently no genetically-engineered (GE) crop production in the Hashemite Kingdom of Jordan. University researchers are interested in developing drought and salinity tolerant varieties. FAS Amman finds that these researchers are the leading advocates for the adoption of a biosafety regulatory framework. Jordan is already one of the world's driest countries; it has one of the lowest levels of per capita water availability in the world (i.e., 150 cubic meters per annum).

The Government of Jordan continues to allow the import of GE products that are approved for use in the country-of-origin and are authorized for export. Jordan's poultry and dairy sectors (the country's largest agribusinesses) rely heavily on imported (predominantly biotech) feed grains. In 2016, Jordan imported roughly one million metric tons (MT) of soybean meal, corn, and distiller's dried grains with solubles (DDGS). Over ninety percent of these commodities are of GE origin. The country also imports consumer-oriented processed food items with GE content.

Jordan lacks a clear agricultural biotechnology framework. The Ministry of Environment has drafted a biosafety law based on the Cartagena Protocol on Biosafety to the Convention on Biological Diversity; the bill is pending parliamentary ratification. The proposed regulation, if enacted, will cover the trade in living modified organisms (LMOs) and establish a notification mechanism. The draft legislation calls for the labeling of products derived from biotechnology.

Jordan is a signatory to the Cartagena Protocol on Biosafety on Biological Diversity (October 11, 2000). Jordan however has yet to implement any of the Cartagena protocol's key provisions.

Public sector opinion on biotechnology is divided. The Ministry of Environment's draft biosafety law will require the labeling of biotech products. The Ministry of Agriculture reportedly has raised concerns that enactment of biosafety law in its current form will adversely impact the country's poultry and dairy sectors. Reportedly the Jordan Food and Drug Administration may also seek to increase oversight of food products with GE content. Importers fear that trade could be impacted if stringent rules are put in place.

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CHAPTER1: PLANT BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE

a) PRODUCT DEVELOPMENT: There is currently no genetically-engineered (GE) crop production in the Hashemite Kingdom of Jordan. University researchers are interested in taking the lead in developing GE applications in Jordan. Researchers are keen to develop drought and salinity tolerant varieties. We understand that there is some limited breeding under highly restricted, controlled research conditions.

FAS Amman finds that university researchers are the leading advocates for the adoption of a biosafety regulatory framework. Academics are concerned with shifting precipitation patterns and more extreme climatic shifts. Jordan is already one of the world's driest countries; it has one of the lowest levels of per capita water availability in the world (150 cubic meters per annum). Shifting precipitation patterns are aggravating the situation where already more than 90 percent of rainfall evaporates or runs off. Some estimates put groundwater's utilization at twice the rate of recharge; agriculture accounts for half of Jordan's water supply's consumption.

The Ministry of Environment's position on biotechnology reportedly is hindering research. Researchers comment that their work is stymied by the absence of a functional biosafety law.

b) COMMERCIAL PRODUCTION: Jordan does not have any commercial GE crop production.

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

d) IMPORTS: Jordan currently allows the import of GE products that are approved for use in the country-of-origin and are authorized for export. The country's poultry and dairy sectors rely heavily on imports of (predominantly biotech) feed grains. In 2016, Jordan imported roughly one million metric tons (MT) of soybean meal, distiller's dried grains with solubles (DDGS), and corn for feed. Over ninety percent of these commodities are of GE origin. The country also imports consumer-oriented processed food items with GE content.

e) FOOD AID RECIPIENT COUNTRIES: Jordan is a food aid recipient country. It receives U.S. food donations in the form of wheat. Under the USDA-Foreign Agricultural Service's Food for Progress (FFP) program Jordan received 100,000 MT of donated U.S.-origin wheat in calendar year (CY) 2016, followed by a similar amount in calendar year 2017. There is no biotechnology related issue associated with the import of wheat; GE-wheat is not commercially cultivated in the United States. No wheat shipments have been rejected to date due to GE content/cross contamination concerns (e.g., containing trace amounts of GE corn).

f) TRADE BARRIERS: Jordan currently maintains an open market for agricultural commodities and products derived through, or produced with biotechnology.

PART B: POLICY

a) REGULATORY FRAMEWORK: Jordan lacks a clear agricultural biotechnology framework. The Ministry of Environment has drafted a biosafety law based on the Cartagena Protocol on Biosafety to the Convention on Biological Diversity (Cartagena Protocol); the bill is pending parliamentary ratification. The proposed regulation, if enacted, will cover the trade in living modified organisms (LMOs) and establish a notification mechanism. The draft legislation calls for the labeling of products derived from biotechnology.

Jordan's dairy and poultry sectors have expressed reservations about the draft biosafety legislation. These are concerned that access to feed would be limited, driving up their production costs. If enacted, the law would require pre-market approval for individual biotech traits. The bill is currently stalled in the Parliament of Jordan (the bicameral Jordanian national assembly). It is unclear whether the biosafety bill will be ratified any time soon.

b) APPROVALS: Jordan lacks a biosafety law; there is currently no approval mechanism.

c) STACKED or PYRAMIDED EVENT APPROVALS: Not applicable.

d) FIELD TESTING: There is currently no ongoing field-testing in Jordan.

e) INNOVATIVE BIOTECHNOLOGIES: Jordan does not have a regulatory policy on the use of 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: Jordanian standards for the labeling of pre-packaged foods are determined by the Jordan Institution for Standards and Metrology's (JISM) Regulation JS 9:2001 (March 2001). This regulation is equivalent to the *Codex Alimentarius* (Codex) general standard for the labeling of pre-packaged foods. However, Regulation JS 9:2001 contains a provision that prohibits the import of any product labeled as genetically-engineered or containing GE ingredients. FAS Amman is unaware to date of any shipments being rejected due to this provision.

h) MONITORING AND TESTING: Currently there is no monitoring and or testing of GE crops is taking place.

i) LOW LEVEL PRESENCE POLICY: Jordan has no low level-presence policy.

j) ADDITIONAL REGULATORY REQUIREMENTS: Not applicable.

k) INTELLECTUAL PROPERTY RIGHTS (IPR): On September 24, 2004, the Government of Jordan deposited its instrument of accession to the International Convention for the Protection of New Varieties of Plants of December 2, 1961, as revised at Geneva on November 10, 1972, on October 23, 1978, and on March 19, 1991, with the Secretary General of the International Union for the Protection of New Varieties of Plants (UPOV). The Convention entered into force for Jordan on October 24, 2004. Jordan's Law No. (24) – Law for the Protection of New Varieties of Plants of the Year 2000 entered into

force on August 2, 2000. This legislation meets with the requirements of the Agreement on Trade-Related Aspects of Intellectual Property Rights (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 on Biological Diversity (October 11, 2000). Jordan's draft biosafety law, if ratified, will implement the protocol's provisions covering the trade in living modified organisms. Jordan has yet to implement any of the Cartagena Protocol's key provisions.

m) INTERNATIONAL TREATIES and FORUMS: Jordan ratified the Cartagena Protocol (November 11, 2003), as well as the Kyoto and Montreal Protocols. It is a member of the International Plant Protection Convention (IPPC) and of Codex. Jordan tries to shy away from any controversial positions that arise between the United States and the European Union (EU).

n) RELATED ISSUES: Not applicable.

PART C: MARKETING

a) PUBLIC/PRIVATE OPINIONS: Public sector opinion on biotechnology is divided. The Ministry of Environment's draft biosafety law will require the labeling of biotech products. The Ministry of Agriculture indicates, however, that enactment of the biosafety law in its current form will adversely impact the country's poultry and dairy sectors. Reportedly the Jordan Food and Drug Administration will seek to increase oversight of food products with GE content; importers fear that this may disrupt trade.

The private sector has differing views. The domestic poultry and dairy industries are highly supportive of biotechnology given their reliance on imported GE feed grains. Jordanian fruit and vegetable exporters, however, oppose the introduction of GE product; given the EU's, one of their key export destinations, skepticism of biotechnology. Jordanian exporters reportedly fear that their market access to the EU could be endangered.

FAS Amman finds that Jordanian consumer GE product acceptance is largely non-controversial. Jordan imports 90 percent of its food; with a per capita income of roughly \$12,000/year (purchasing power parity), Jordanians tend to be price driven and are not overly focused on the issue.

b) MARKETING STUDIES: FAS Amman is unaware of any recent marketing studies that have evaluated Jordanian public attitudes towards products derived from agricultural biotechnology.

CHAPTER 2: ANIMAL BIOTECHNOLOGY

PART D: PRODUCTION AND TRADE

- a) **PRODUCT DEVELOPMENT:** No GE animals are under development in Jordan. FAS Amman does not see any GE animals coming to the market in the near future.
- b) **COMMERCIAL PRODUCTION:** No GE animals have been approved for any type of use in Jordan. The country does not produce commercially any livestock clones, GE animals, and or products derived from animal biotechnology.
- c) **EXPORTS:** Not applicable.
- d) **IMPORTS:** Jordan does not import any GE animals, livestock clones, and or products derived from animal biotechnology (including genetics).
- e) **TRADE BARRIERS:** Not applicable.

PART E: POLICY

- a) **REGULATORY FRAMEWORK:** There is no policy currently with respect to animal biotechnology. The biosafety bill does call for a ban on animal biotech, including the import of meat (no longer living) derived from biotech animals.
- b) **INNOVATIVE BIOTECHNOLOGIES:** Not Applicable.
- c) **LABELING AND TRACEABILITY:** Not Applicable.
- d) **INTELLECTUAL PROPERTY RIGHTS (IPR):** Not Applicable.
- e) **INTERNATIONAL TREATIES and FORUMS:** Jordan is a member of several international organizations dealing with animal health and protection (e.g., the Food and Agriculture Organization and Codex). Jordan follows the World Organization for Animal Health (OIE) standards and protocols on the import of live animals and beef products. It does not actively oppose animal biotechnology; however, it chooses not to engage on the subject matter.
- f) **RELATED ISSUES:** Not Applicable.

PART F: MARKETING

a) MARKET ACCEPTANCE: Jordanians have limited knowledge regarding GE animal events. There is no information on market acceptance of these products.

b) PUBLIC/PRIVATE OPINIONS: No information exists on market acceptance or opinions.

c) MARKET STUDIES: Not applicable.