Required Report: Required - Public Distribution **Date:** February 10,2020

Report Number: KZ2019-0012

Report Name: Agricultural Biotechnology Annual

Country: Kazakhstan - Republic of

Post: Nur-Sultan (Astana)

Report Category: Biotechnology and Other New Production Technologies

Prepared By: FAS staff

Approved By: Timothy Harrison

Report Highlights:

In the past year, there have been no major changes in Kazakhstan's biotechnology policy. Kazakhstan continues to rely on Eurasian Economic Union (EAEU) regulations for guidance on biotechnology issues. Genetically engineered (GE) seeds are currently only permitted to be grown in laboratories. Despite success by Kazakhstani researchers in developing new GE varieties, the Government of Kazakhstan shows little interest in developing new regulations more favorable to biotechnology at this time.

EXECUTIVE SUMMARY:

Since Kazakhstan withdrew draft biotechnology legislation in May 2016, essentially all progress on biotechnology issues has stopped. Without this law in place, development of agricultural biotechnology will remain constrained in Kazakhstan.

As a member of The Eurasian Economic Union (EAEU), policies and views of the other member states, especially Russia, play a key role in regulating biotechnology in Kazakhstan. In particular, Kazakhstan has made a point of enforcing EAEU labeling regulations on GE products.

Covering nearly half of all planted area, wheat dominates Kazakhstan's crop production. The Ministry of Agriculture has a strategy of diversifying crop production away from wheat and into more feed grains and oilseeds. The Ministry is also actively seeking foreign investment and modernization in the agricultural sector; however, agricultural biotechnology is not part of the Ministry's latest five-year Agricultural Plan.

A 2015 amendment to the 2003 law "On Seed Farming" restricts new testing and prohibits commercial growth of GE seeds. However, biotechnology research may be conducted in laboratory greenhouses, and the National Center for Biotechnology (under the Ministry of Education and Science) has developed a transgenic breed of cotton with higher pesticide resistance.

TABLE OF CONTENTS

CHAPTER 1: PLANT BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE:

a) PRODUCT DEVELOPMENT: Since the 2015 amendment to the Seeds Law, which prevents full field trials or commercial production of genetic engineering events, research and development in Kazakhstan has been constrained, and testing limited to laboratory greenhouses. The National Agrarian Scientific Education Center (NASEC, website: in Russian), under the Ministry of Agriculture, manages 16 agricultural research and education institutes. This group focuses on traditional methods of product development. The National Center for Biotechnology (NCB) under the Ministry of Science and Education has a small agricultural research component, which has developed biological fertilizers and pesticides, fungal strains for resistance testing, and new varieties of wheat and potato. As a first step into genetic engineering, NCB has developed one transgenic cotton variety[1] to resist the herbicide phosphinotricin, but that cotton cannot be field tested or commercialized in Kazakhstan due to the regulatory environment.

b) COMMERCIAL PRODUCTION: Kazakhstan does not produce any GE crops commercially, and without the passage of new legislation, it is unlikely that substantial development will occur. In the agricultural development program designed by the Ministry of Agriculture for 2018-2027, there is no mention of GE crops or GE technologies. Kazakhstan crop production is dominated by wheat, which accounts for 50 percent of all field crop area, and 81 percent of all grain and legumes area. Crops for which common GE varieties exist globally for commercial use are not significant in Kazakhstan, with corn and soybean area each at only one percent of total crop planted area. Oilseeds (rapeseeds, soybeans, flax) area has been increasing, and in 2019 reached a historical high at 13 percent of total planted area. Cotton area planted is only one percent of the total, and sugar beet production area is only 0.2 percent of the total planted area. The Kazakhstani Government is supporting crop diversification away from wheat, but to date there has been little sign of demand for GE crop seeds.

c) EXPORTS: There is no commercial production of GE crops in Kazakhstan, nor does Kazakhstan export any GE crops to the United States or other countries.

d) IMPORTS: Imports of GE crops or products are allowed into Kazakhstan, and must abide by EAEU regulations (see Appendix 1), which cover Belarus, Russia, Armenia, Kyrgyzstan and Kazakhstan. For instance, the EAEU Technical Regulation on Grain stipulates that grain/oilseeds for either food or feed use may only contain GE lines registered in accordance with the legislation of the individual member states of the EAEU, and that the GE grain presence of non-registered lines shall not exceed 0.9 percent. Because Kazakhstan lacks a process by which to register new lines, Russia has become the default approver. (Please see the FAS Moscow's 2019 GAIN Agricultural Biotechnology Annual Report[2] for the Russian Federation for a list of lines registered in Russia/EAEU for importation.) Kazakhstan imports only small amounts of corn or soybeans. In 2018, soybean imports reached a low point of 4,614 metric tons (MT), but rebounded during January-August 2019 to hit a historical high level at 19,201 MT.

[1] The link is available in Russian language only.
[2] Here and further throughout the report, to download GAIN reports, please, proceed to http://gain.fas.usda.gov

Most soybeans are imported from Russia. The Kazakh law "On Seed Farming" specifies that GE seeds are prohibited for planting.

e) FOOD AID: Kazakhstan is not a food aid recipient, nor does it provide food aid for other countries. At this time, all aid is only monetary. Historically, Kazakhstan made some shipments of wheat, barley, and vegetable oil as part of humanitarian aid to Kyrgyzstan and Afghanistan, and the country is considering providing food aid in the future. Because crops grown in Kazakhstan are GE-free, all provided food aid would also be GE-free.

f) TRADE BARRIERS: All imported GE grains and oilseeds must have their lines registered in the EAEU prior to importing into Kazakhstan, and the presence of non-registered lines cannot exceed 0.9 percent. Kazakhstan's imports of U.S. corn and soybeans (and soybean products) are currently minimal, in part because the GE lines are not registered. In 2012 and 2013, Kazakhstan and Russia both banned the importation of GE-corn NK603 as a result of a published study by a French scientist questioning the safety of that type of GE-corn. The European Food Safety Authority (EFSA) responded to this published study by stating that it was "of insufficient scientific quality to be considered as valid for risk assessment" and that "such shortcomings mean that EFSA is presently unable to regard the author's conclusions as scientifically sound." Russia removed the ban without any public acknowledgement, and Kazakhstan has not made public the status of its ban. Given the lack of information regarding its status, no one has attempted to import this line of corn.

PART B: POLICY

a) REGULATORY FRAMEWORK: Significant development of agricultural biotechnology is unlikely to occur in Kazakhstan without any comprehensive law in place. When the country was actively seeking entrance to the World Trade Organization (WTO), Kazakhstani President Nursultan Nazarbayev instructed the government to adjust the plan for the development of the agro-industrial complex to permit GE crops. The Ministry of Education and Science presented a draft law, "On State Regulation of Genetic Engineering Activities," (please see *2016 Kazakhstan Agricultural Biotechnology Report* for an unofficial translation of the entire law). The draft law remained stalled in the Kazakh Parliament until the Kazakh Government Decree No 307 dated May 30, 2016[3] (link in Russian) withdrew the draft, citing budgetary stress. Now political forces are no longer focused on it and a new draft is not likely in the foreseeable future.

The 2003 law "On Seed Farming" included provisions to allow the sowing of GE seeds in Kazakhstan. In November 2015, the law was amended to become more restrictive. Article 13 of the law expressly prohibits commercial use and planting of crops derived from genetic engineering.

Where previously exceptions were in place to allow for field trials of GE seeds, they now can

[3] The link is available in Russian language only.

only be planted in laboratory greenhouses. This change severely limits testing and prevents commercial production.

b) APPROVALS: Because Kazakhstan lacks its own legislation to regulate GE approvals, the registration of GE lines for the entire EAEU for use in food is done by the Federal Service for Surveillance of Consumer Rights Protection and Human Welfare of the Russian Federation (Rospotrebnadzor). GE lines for use in feed are approved by Russia's Federal Veterinary and Phytosanitary Surveillance Service (VPSS). For new EAEU regulatory updates and the list of approved lines please see the most recent 2019 GAIN Agricultural Biotechnology Report by FAS Moscow.

c) STACKED OR PYRAMIDED EVENT APPROVALS: In the absence of its own regulations, Kazakhstan relies on EAEU and, by extension, Russian rules on all approvals. Without regulations for stacked or pyramided event approvals, they are all in effect banned.

d) FIELD TESTING: Unless the Government of Kazakhstan redrafts its law "On State Regulation of Genetic Engineering Activities," it is unlikely any field trials will occur.

e) INNOVATIVE BIOTECHNOLOGIES: Kazakhstan hasn't addressed the regulation of plant products derived from genome editing.

f) COEXISTENCE: Not applicable since there is no mechanism for cultivation of GE crops.

g) LABELING: Labeling rules are covered by a Customs Union Technical Regulation on Labeling (please see Appendix 1), which came into force on July 1, 2013. This regulation states that all products containing more than 0.9 percent GE-ingredients must be labeled as such. Also, the regulation states that labeling of food products as non-GE is voluntary.

h) MONITORING AND TESTING: In 2017, the Ministry of Health reported the results of a large-scale series of tests on imported and domestically-produced products for the presence of GE events or products thereof, which resulted in the removal of some U.S. food products from supermarket shelves. Since that time, there has been no reporting on product testing.

i) LOW LEVEL PRESENCE (LLP) POLICY: According to EAEU Regulations, not more than 0.9 percent of registered or non-registered GE lines in food products or ingredients, and not more than 0.9 percent of registered GE lines and not more that 0.5 percent of non-registered GE lines in feed or feed ingredients.

j) ADDITIONAL REGULATORY REQUIREMENTS: The Kazakhstani law "On Seed Farming" prohibits any significant planting of GE seeds.

k) INTELLECTUAL PROPERTY RIGHTS (IPR): The Kazakhstani Law "On Selection Achievements Copyright" allows for patents for plant and crop improvements.

l) CARTAGENA PROTOCOL RATIFICATION: Kazakhstan ratified the Cartagena Protocol in 2008.

m) INTERNATIONAL TREATIES and FORUMS: Kazakhstan is member of the World Trade Organization, the World Health Organization, Codex Alimentarius, and the International Plant Protection Convention. At the 40th session of the Codex Alimentarius Commission held in Geneva on July 17-22, 2017, the Republic of Kazakhstan was elected as a coordinator of the FAO/WHO Coordination Committee for Europe for 2018-2019. However, Kazakhstan has not actively participated in discussions or announced positions with regards to biotechnology. Kazakhstan is not a signatory of the International Union for the Protection of New Varieties of Plants (UPOV).

n) RELATED ISSUES: none

PART C: MARKETING

a) PUBLIC/PRIVATE OPINION: There is limited active campaigning about GE products and production, and mass media on the topic generally originates from Russia or Europe. Since Kazakhstan produces few crops for which GE varieties exist, this issue is not of great importance to farmers groups or the Ministry of Agriculture in general. Although biotech feed components may prove necessary for the Ministry's targeted increase in livestock production, the general desire is to keep to "organic" production methods. There is a general lack of knowledge and understanding of biotechnology among farmers and consumers, and significant pride in agricultural production that is seen as "ecologically clean."

b) MARKET ACCEPTANCE / STUDIES: In Kazakhstan, the public is apprehensive about purchasing GE products. No known marketing studies exist on the acceptance of GE plants or products in Kazakhstan.

CHAPTER 2: ANIMAL BIOTECHNOLOGY:

PART D: PRODUCTION AND TRADE

a) PRODUCT DEVELOPMENT: There are no GE animals or livestock cloning known to be under development in Kazakhstan.

b) COMMERCIAL PRODUCTION: The Government has made increased cattle production the top agricultural priority (including turning Kazakhstan into a beef exporter). While this strategy includes importing pedigree breeding animals, semen, and embryos, it has not encouraged research of GE animals or clones.

c) EXPORTS: Kazakhstan does not export any GE animals or livestock clones.

d) IMPORTS: Kazakhstan does not import any GE animals or livestock clones, but there are no restrictions in place.

e) TRADE BARRIERS: Kazakhstan imports U.S. livestock in substantial quantities, and there have never been any GE-related or cloning related trade barriers to date.

PART E: POLICY

a) REGULATORY FRAMEWORK: The approval process and governing bodies responsible for regulating biotechnology in the draft law "On State Regulation of Genetic Engineering Activities" did not differentiate between plant and animal biotechnology. Since the draft's withdrawal there has been no regulatory framework for animal biotechnology in Kazakhstan.

b) APPROVALS: Not applicable

c) INNOVATIVE BIOTECHNOLOGY: Kazakhstan hasn't addressed the regulation of animals derived from genome editing.

d) LABELING AND TRACEABILITY: Not applicable

e) INTELLECTUAL PROPERTY RIGHTS (IPR): There are no patent rights established for GE animals or cloned products.

f) INTERNATIONAL TREATIES and FORUMS: Kazakhstan is member of World Trade Organization, the World Health Organization, Codex Alimentarius, and the World Organization for Animal Health (OIE). However, the country has not actively participated in discussions related to animal biotechnologies, nor has it made noteworthy positions at these forums.

g) RELATED ISSUES: Not applicable

PART F: MARKETING

a) PUBLIC/PRIVATE OPINIONS: Not applicable

b) MARKET ACCEPTANCE/STUDIES: There are no known market studies on the marketing of GE animals in Kazakhstan.

Appendix 1 – Decisions of the Customs Union Regarding Biotechnology

The Customs Union (CU, which became the Eurasian Economic Union in 2015) adopted several technical regulations that came into force on July 1, 2013, and which influence agricultural and food biotechnology. These technical regulations require marking the presence of GE events and informing consumers in cases when food products are processed from or with the use of genetic engineering even if there is no DNA or proteins of GE components in the marketed food products:

1. **CU Technical Regulation (TR) No 021/2011 on Safety of Food Products**[4] (please see FAS Moscow 2012 GAIN Report for an unofficial English translation) was adopted in December 2011 and came into force on July 1, 2013. The definition of "genetically modified organisms" (hereinafter "GMO") in this TR is "genetically modified (genetically engineered, transgenic) organisms – an organism or several organisms, any noncellular, unicellular or multicellular formations able for reproduction or transfer of genetic material differing from natural organisms obtained with the use of genetic engineering methods and (or) containing genetically engineered material including genes, their fragments or gene combinations." The chapter about General Food Safety Requirements (Chapter 2, paragraph 9) the TR states the following: "During production (manufacturing) of food products from food raw materials obtained from GMO of plant, animal, and microbial origin, GMO lines that underwent state registration shall be used. If the manufacturer did not use GMO during production of food products, presence in food products of 0.9 percent or less of GMO is considered an adventitious or technically intractable impurity, and such products are not considered as food products containing GMO." In the safety requirements for Specialized Food Products (Article 8), paragraph 1 states the following: "During production (manufacturing) of food products for baby food, food products for pregnant and nursing women, use of food raw materials containing GMO is not allowed."

In the list of standards containing the rules and methods of examination (testing) and measurement, including the rules for selection of samples required for application and meeting of the requirements of TR TS 021/2011, there are two standards covering the GE products regulations: GOST R 52173-2003 "Food Raw Material and Food Products. Methods for detection of genetically modified organisms (GMO) of plant origin" and GOST R 52174-2003 "Biological Safety. Raw materials and food products. Methods for detection of genetically modified organisms (GMO) of plant origin by using biological microchips" shall be used. The instructions and methodological guidelines listed for GE products is MUK 4.2.2304-07 "On surveillance over circulation of food containing GMO."

2. **CU TR No 022/2011 on Food Labeling** (adopted in December 2011, entered into force on July 1, 2013). This TR requires that food products with GE content shall be labeled, and determines the format of this labeling. The product is not considered GE with presence of 0.9 percent or less GE content, and shall not be labeled. Labeling of food products as non-GE is voluntary and absence of GE shall be proved and documented. Article 4, paragraph 4.1 sets out requirements for labeling of packaged food, including: "Information on the presence of food product ingredients obtained with the use of genetically modified organisms (hereinafter referred to as GMO)." In paragraph 4.4 on ingredient listing, the regulation notes that components of compound ingredients that account for

[4] The link is available in Russian language only.

two percent or less of the compound ingredient by mass do not need to be listed, “except in cases of food additives, flavoring agents and food additives which are part thereof, biologically active substances and medical plants, **ingredients derived using GMOs and ingredients specified in Clause 14 of Part 4.4 of this Article**” (emphasis added).

Paragraph 4.10 notes: “The information on specific characteristics of food products, including that on the absence of components obtained from GMO (or) with the use of GMO, shall be confirmed by proof, submitted by a person, making this statement in the food product labeling independently or received by this person with participation of other persons. Organizations or individual entrepreneurs releasing such food products in circulation in the unified customs area of the Customs Union shall keep the proof of presence of specific characteristics of food products; the latter shall be presented in the cases stipulated in the legislation of the Customs Union.” Additionally, paragraph 4.11 describes additional labeling requirements for foods containing GE ingredients:

1) For food products obtained with the help of GMO, including those not containing deoxyribonucleic acid (DNA) and proteins, the following information shall be specified: "Genetically modified products" or "Products obtained from genetically modified organisms," or "The product contains components of genetically modified organisms." If the manufacturer did not use genetically modified organisms in the process of manufacturing food products, the content of GMO of 0.9 percent or less is an accidental or technically irremovable impurity, and such food products shall not be referred to as food products containing GMO. When labeling such food products, the fact of the GMO presence shall not be stated.
2) The indication of the following information is obligatory for food products obtained from genetically modified microorganisms or with the use thereof (bacteria, yeast and filamentous fungi, the genetic material of which was modified with the help of genetic engineering methods) (hereinafter referred to as the genetically modified material, GMM):
   - For products containing living GMM - "The product contains living genetically modified microorganisms"
   - For products containing unviable GMM - "The product was obtained with the help of genetically modified microorganisms;"
   - For products freed from engineered GMM or for products produced with the help of components freed from engineered GMM - "The product contains components obtained with the help of genetically modified microorganisms.”
3) Labeling of food products shall not contain information on GMO presence with respect to the used processing aids, produced from or with the help of GMO.”

3. **CU TR No 015/2011 on the Safety of Grain** (adopted in December 2011, entered into force on July 1, 2013). The TR determines requirements on information on grain /oilseeds during transportation either in bulk or in consumer packs (for feed purposes). In Article 4 (Safety Requirements), paragraph 16 stipulates that grain transported unpacked should be accompanied by shipping documents that ensure its traceability and provide information on GE if presence of GE content is higher than 0.9 percent. For the grain obtained with the use of GEs the following information should be given: "Genetically modified grain" or "grain obtained from the use of genetically modified organisms" or "grain contains components of genetically modified organisms,"

indicating the unique identifier of the GE event. In addition, in the sanitary requirements for grain/oilseeds (MRLs of toxic elements, micotoxins, pesticides, radionuclides, and pests) the TR stipulates that grain/oilseeds (both for food and for feed use) may contain only registered GE lines (registered in accordance with the legislation of the members of the CU), and in the GE grain presence of non-registered lines shall not exceed 0.9 percent. The same testing standards referenced by TR 021/2011 shall be applied for TR 015/2011 as well (GOST R 52173-2003 and GOST R 52174-2003).

Attachments:

No Attachments