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Kazakhstan Agricultural Biotechnology Annual Report

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Report Highlights:

There was one notable change in Kazakhstan over the last year with regard to genetically engineered (GE) products. The draft law “On State Regulation of Genetic Engineering Activities” was withdrawn from the Kazakh Parliament after five years of consideration, with the reason that it would demand extra budgetary spending. The outlook for biotechnology in Kazakhstan has diminished with the absence of any new legislation, as leaders rely on Eurasian Economic Union (EAEU) regulations. In addition, the law on Seeds Farming was amended to restrict GE growth. New testing of processed products for GE ingredients has resulted in fines levied against importers.

EXECUTIVE SUMMARY:

Kazakhstan withdrew its draft law “On State Regulation of Genetic Engineering Activities” from Parliamentary review in May 2016. The draft was submitted in September 2010 and had undergone a number of hearings by the Parliamentary Committee, but concern about additional budgetary spending while the Kazakh Government seeks to limit costs eventually killed it. Without this law in place, development of agricultural biotechnology beyond what is currently allowed is unlikely to occur in Kazakhstan. Sources believe that it is unlikely that this law will be reconsidered unless Kazakhstan’s primary trade partner, Russia, changes its stance on the topic.

The Eurasian Economic Union (EAEU) regulations (covering not just Kazakhstan but also Russia, Belarus, Armenia and Kyrgyzstan) have recently come into force regulating labeling and imports of GE products. As Kazakhstan continues to integrate into the EAEU, it is expected that policies and views of the other member states (especially Russia) will play a greater role in regulating biotechnology in Kazakhstan. In particular, Kazakhstan has made a point of enforcing EAEU labeling regulations on GE products.

Covering nearly two-thirds 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; however, agricultural biotechnology is not part of the Ministry’s most recent five-year Agricultural Plan. Not only that, but an amendment to the 2003 Law “On Seeds Farming” restricts new testing and commercial growth of GE seeds.

PLANT AND ANIMAL BIOTECHNOLOGY

CHAPTER 1: PLANT BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE:

- a) Product development: One GE crop development project has been completed in Kazakhstan. The new GE crop development project was for a drought resistant wheat variety, conducted jointly with Australian researchers. This research project developed 21 polyploid wheat lines in 2014 and conducted field trials. No follow-up has been planned and no new research is expected.
- b) Commercial production: Kazakhstan does not produce any GE crops, and without the passage of the law “On State Regulation of Genetic Engineering Activities” it is unlikely that substantial development will occur. In the previous agricultural program designed by the Ministry of Agriculture for 2013-2020, as well as in the new 2017-2021 agricultural development program, there is no mention of GE crops or GE technologies. Kazakhstan crop production is dominated by wheat, which accounts for 45 percent of all field crop area, and 62 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 area at only 1.2 percent and soybean area at only 0.6 percent of total crop planted area. Oilseeds area has been increasing and in 2017 reached a historical high at 12.4 percent of total planted area. Cotton area is only 1.5 percent of the total, and sugar beet production area is only 0.2 percent of the total planted area. The Kazakh Government does have a plan to diversify production away from wheat, and this effort is bringing the increase in area of oilseeds and other feed grains.

- 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 Eurasian Economic Union (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 contain only 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 [GAIN](#) Annual Report for the Russian Federation for Agricultural Biotechnology for a list of lines registered in Russia/EAEU for importation). Kazakhstan imports only small amounts of corn or soybeans. Kazakhstan recently has been importing soybeans mainly from Ukraine and China. In 2014, Kazakhstan imported 2,545 tons of soybeans from Ukraine and 4 tons from China. In 2015, these amounts fell precipitously to 324 tons from Ukraine and 41 tons from China and in 2016 soybean imports reached a low point at 170 tons. The Kazakh law “On Seeds 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. Currently, Kazakhstan’s imports of U.S. corn and soybeans (and soybean products) are largely non-existent 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. Therefore, it is effectively still in place, and no one has attempted to import this line of corn.

PART B: POLICY

- a) Regulatory framework: The Ministry of Education and Science drafted a law, “On State Regulation of Genetic Engineering Activities,” in order to regulate biotechnology in Kazakhstan (please see [2016 Kazakhstan Agricultural Biotechnology Report](#) for an unofficial translation of the entire law) and presented it to the Socio-Cultural Committee of the Parliament. This draft law on State regulation of genetic engineering activity specified separate roles for government bodies to regulate agricultural biotechnology for health, agriculture, and environmental protection, but did not identify these authorized bodies.

This law remained stalled in the Kazakh Parliament until the [Kazakh Government Decree No 307](#)

[dated May 30, 2016](#) withdrew the draft. The reason given for withdrawal was that this law would cause additional budgetary spending. Without any comprehensive law in place, development of agricultural biotechnology is unlikely to occur in Kazakhstan. In January 2014, at a time when the country was actively seeking entrance to World Trade Organization (WTO), Kazakh President Nursultan Nazarbayev instructed the government to adjust the plan for the development of the agro-industrial complex to permit genetically engineered crops. However, this provision will not likely move forward now that political forces are no longer focused on it.

The 2003 Law “on Seeds Farming” made concessions to allow the growth of GE seeds in Kazakhstan. In November 2015, [the law was amended](#) to become more restrictive. Six months after publication, the following came into force:

“Article 13. Requirements to production and use of seeds

1. The following seeds of agricultural crops are prohibited for commercial use and planting:

- 1) infected with quarantine objects;
- 2) without testing for quality according to the present Law;
- 3) derived from genetic engineering (genetically modified).”

Where previously exceptions were in place to allow for some use of GE seeds, those exceptions have been removed. This will prevent both testing and commercial production in the future.

- b) Approvals: Because Kazakhstan lacks the legislation to regulate GE approvals, the registration of GE lines for the entire EAEU (Belarus, Russia, Kyrgyzstan, Armenia and Kazakhstan) for use in food is done by the Federal Service for Surveillance of Consumer Rights Protection and Human Welfare of the Russian Federation (Rospotrebnadzor) and for use in feed – by the Federal Veterinary and Phytosanitary Surveillance Service (VPSS) For the list of approved lines by Rospotrebnadzor please see FAS [GAIN](#) Annual Report for the Russian Federation for Agricultural Biotechnology.
- c) Stacked or pyramided event approvals: The draft law on biotechnology did not include any information on stacked or pyramided event approvals.
- 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 again. Currently there are no field trials.
- e) Innovative biotechnologies: Not applicable.
- f) Coexistence: The draft law did not specify coexistence rules.
- 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. If it contains less than 0.9 percent GE-ingredients then it does not have to be labeled. 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 conducting a series of tests on imported and domestically-produced products for the presence of GE events or products thereof. The Ministry of Health reported that 1,292 food samples were studied and of these tests, four samples tested positive for the presence of GE products and exceeding allowed 0.9 percent level at 11.4 and 42.9 percent. Samples of bread crumb and ready-to-eat soup in cups from the United States contained a GE presence above 0.9 percent and thus, according to Kazakh regulations, should have been labeled.

- i) Low level presence (LLP) policy: According to Customs Union Regulations, up to 0.9 percent of unapproved GE events are allowed.
- j) Additional regulatory requirements: The Kazakh law “On Seeds Farming” specifies that GE seeds are prohibited for planting for commercial use.
- k) Intellectual property rights (IPR): The Kazakh 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/forums: Kazakhstan is member of 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.
- n) Related issues: none

PART C: MARKETING

- a) Public/private opinion: There is limited active campaigning about GE products and production. Since Kazakhstan produces few crops for which GE varieties exist, this issue is not of great importance to farmers groups, the Grain Union, or the Ministry of Agriculture in general.
- b) Market acceptance / studies: In Kazakhstan, the public is apprehensive about purchasing GE products. However, there seems to be an understanding that due to global trade, it is difficult to be completely isolated from these products. There is some marketing of products as non-GE (especially for items like baby-food) but for the most part, non-GE labeling is not an important marketing strategy. No known marketing studies exist on the acceptance of GE plants or products in Kazakhstan.

CHAPTER 2: ANIMAL BIOTECHNOLOGY: (Cloning is an animal biotechnology that developers frequently utilize in conjunction with other animal biotechnologies such as genetic engineering and therefore included in this report.)

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: Although the Government has made increased cattle production the top agricultural priority (including turning Kazakhstan into a beef exporter), this strategy includes importing pedigree breeding animals, semen and embryos but not 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 trade barriers to date.

PART E: POLICY

- a) Regulatory framework: Animal biotechnology would be governed by the draft law “On State Regulation of Genetic Engineering Activities,” which was withdrawn from the Kazakh parliament after 5 years of consideration. The approval process and governing bodies responsible for regulating biotechnology in the draft law did not differentiate between plant and animal biotechnology.
- b) Innovative biotechnology: Not applicable
- c) Labeling and traceability: Not applicable
- d) Intellectual property rights (IPR): There are no patents rights for GE animals or cloned products.
- e) International treaties/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.
- f) 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 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](#) (please see [GAIN Report RS1233](#) 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.” In the chapter about the 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 do not belong to 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.”

On 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.” This TR 021/2011 stipulates that food products can be processed only from GM organisms/microorganisms registered in the CU. If the producer did not use GMO at processing of food products, the presence of 0.9 percent and less of GMO is considered an adventitious, unavoidable presence, and the product is not considered GE. The TR also bans use of GMO in baby food and in food for pregnant and nursing women.

2. CU TR No 022/2011 on Food Labeling (adopted in December 2011 and came into force on July 1, 2013). This TR requires that food products with GMO shall be labeled, and determines the format of this labeling. Presence of 0.9 percent and less GMO shall not be labeled, and the product is not considered GM. Labeling of food products as non-GMO is voluntary and absence of GMO shall be proved and documented. In Article 4, paragraph 4.1 “Requirements for labeling of packaged food products:” 10) 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 “General Requirements for Indication of Ingredients in Food Products Labeling:” 2. If the food product contains a compound ingredient (with two or more components), all the components which are part of such compound ingredient shall be listed, according to the requirements of Clause 1 of Part 4.4 of this Article, or the name of the compound ingredient shall be indicated with addition of components thereof, in brackets, depending on the mass fraction thereof, highest to lowest. If the mass fraction of the compound ingredient equals two percent or less, it is allowed not to specify the components thereof, 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. In paragraph 4.10 General Requirements for Specification of Information on Specific Characteristics of Food Products in Food Products Labeling: 2. 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. There is a special paragraph 4.11. "Requirements for Specification of Information on Presence of Ingredients Obtained with the Use of Genetically Modified Organisms in Food Products in Food Products Labeling:"

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, came 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 GMO if presence of GMO is higher than 0.9 percent. For the grain obtained with the use of GMOs the 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 transformation event. In addition, in the sanitary requirements for grain/oilseeds (MRLs of toxic elements, micotoxins, pesticides, radionuclide and pests) the TR stipulates that grain/oilseeds (both for food and for feed use) may contain only registered GMO lines (registered in accordance with the legislation of the states, members of the CU), and in the GM grain presence of non-registered lines shall not exceed 0.9 percent "Grain may contain only those GMO lines that are registered in accordance with the legislation of states – members of the Customs Union. In grain that contains GMO presence of not more than 0.9 percent of non-registered GMO lines is allowed." The same GOSTs as in TR 021/2011 shall be applied (GOST R 52173-2003 and GOST R 52174-2003).

