Required Report: Required - Public Distribution **Date:** October 28, 2021

Report Number: KZ2021-0010

Report Name: Agricultural Biotechnology Annual

Country: Kazakhstan - Republic of

Post: Nur-Sultan (Astana)

Report Category: Biotechnology and Other New Production Technologies

Prepared By: FAS-Nur-Sultan Staff

Approved By: Christopher Bielecki

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 some successes by Kazakhstani researchers in developing new GE varieties, the Government of Kazakhstan shows little interest in developing new regulations more favorable to agricultural biotechnology at this time.

EXECUTIVE SUMMARY:

Since Kazakhstan withdrew draft biotechnology legislation "On State Regulation of Genetic Engineering Activities" in 2016, essentially all progress on developing biotechnology regulations has stopped. Without this law, development of agricultural biotechnology is expected to remain constrained. As a member of the EAEU, policies and views of the other member states, especially Russia, play a key role in regulating biotechnology. Kazakhstan has been active in enforcing EAEU labeling regulations on GE products.

Wheat covers half of all Kazakhstan's crop production by area. The Ministry of Agriculture has a strategy to diversify crop production away from wheat and into other feed grains and oilseeds. The Ministry has voiced the need to modernize the agricultural sector and has actively sought foreign investment in the livestock sector. These moves could necessitate producing more feed grains and oilseeds using agricultural biotechnology. Agricultural biotechnology is not part of the Ministry's latest five-year Agricultural Plan.

A 2015 amendment to the 2003 law, "On Seed Farming" restricted new testing and prohibited commercial growth of GE seeds. Biotechnology research may be conducted in laboratory greenhouses. The National Center for Biotechnology has developed a transgenic breed of cotton with higher pesticide resistance, and a disease-resistant GE potato.

TABLE OF CONTENTS

CHAPTER 1: PLANT BIOTECHNOLOGY
PART A: PRODUCTION AND TRADE
PART B: POLICY
PART C: MARKETING

CHAPTER 2: ANIMAL BIOTECHNOLOGY
PART D: PRODUCTION AND TRADE
PART E: POLICY
PART F: MARKETING

CHAPTER 3: MICROBIAL BIOTECHNOLOGY
PART G: PRODUCTION AND TRADE
PART H: POLICY
PART I: MARKETING

CHAPTER 1: PLANT BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE:

a) PRODUCT DEVELOPMENT: Since the 2015 amendment to the Law "On Seed Farming[1]," which prevents full field trials or commercial production of genetic engineering events, research and development has been limited to laboratory greenhouses. The National Agrarian Scientific Education Center (NASEC), under the Ministry of Agriculture, manages 16 agricultural research and

[1] The link is available in Russian language only

education institutes. This group focuses on traditional seed breeding methods. The National Center for Biotechnology (NCB) has a small agricultural research component, which has developed biological fertilizers and pesticides, fungal strains for resistance testing, and new varieties of wheat and potatoes. As a first step to experiment with GE technologies, NCB developed one transgenic cotton variety[2] that is resistant to the herbicide phosphinothricin (glufosinate). This cotton variety cannot be field tested or commercialized due to the regulatory environment.

As of October 2020, scientists from the M. Aitkhozhin Molecular Biology and Biochemistry Institute under the Ministry of Education and Science developed a new GE potato.[3] The transgenic potato has significantly higher resistance to Potato Virus Y compared to conventional potato breeds. The lines of transgenic potato are reportedly under field trials at the Potato and Vegetable Research Institute, which is operated by the Ministry of Agriculture.

b) COMMERCIAL PRODUCTION: Kazakhstan does not produce GE crops commercially. It is not expected that substantial research and development will occur without the passage of new agricultural biotechnology legislation. The Ministry of Agriculture's 2017-2021 agricultural development program does not mention GE crops or GE technologies, despite the country's need to expand livestock feed production. Kazakhstan crop production is dominated by wheat, which accounts for 56 percent of all field crops by area, and 70 percent of all grain and legume production. Kazakhstan does not produce crops for which common GE varieties exist for commercial use in significant quantities. By area, corn is produced on 0.8 percent and soybeans on 0.5 percent of total planted area. Oilseed area (e.g., flax, rapeseeds, sunflower, safflower) has been increasing, and in 2021 reached an estimated 13 percent of total planted area. Cotton is planted on only 0.5 percent, and sugar beet on only 0.1 percent of the total planted area. Most foreign seed suppliers have focused on providing hybrid seed to producers.

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 derived from GE crops are technically allowed into Kazakhstan according to EAEU regulations. The EAEU includes Belarus, Russia, Armenia, Kyrgyzstan, and Kazakhstan. For instance, the EAEU Technical Regulation on Grain, stipulates that grain and oilseeds for either food or feed may only contain GE lines registered in accordance with the legislation of the individual EAEU member states, and that the presence of non-registered GE grain 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 FAS-Moscow's GAIN Agricultural Biotechnology Annual Report for the Russian Federation for a list of lines registered in Russia/EAEU for importation. These approvals are also recognized in Kazakhstan. Kazakhstan imports small amounts of corn and soybeans. In 2020, soybean imports reached 21,062 metric tons (MT), a decrease from 32,811 MT in 2019. Most soybeans are imported from Russia. Kazakhstani imports of soybean meal in 2020 reached a historical record of 65,120 MT, mainly from Russia. Kazakhstan's law "On Seed Farming" specifies that GE seeds are prohibited for planting.

e) FOOD AID: Kazakhstan is not a food aid recipient. Historically, Kazakhstan shipped relatively small amounts of wheat, barley, and vegetable oil to Kyrgyzstan and Afghanistan as humanitarian aid. In 2020, Kazakhstan provided in-kind food aid of grain, flour, vegetable oil, and similar

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

products to some countries in Central Asia (Tajikistan, Afghanistan, Uzbekistan, and Kyrgyzstan). Because all crops grown in Kazakhstan are non-GE, all provided food aid would also be non-GE.

f) TRADE BARRIERS: All imported GE grains and oilseeds must have their lines registered in the EAEU prior to entering 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 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 because of a study published by a French scientist questioning the safety of that GE corn. The European Food Safety Authority (EFSA) responded to this 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. Kazakhstan continues to test for the presence of GE content in foods, leading to periodic removal of products from store shelves. In September 2020, the Ministry of Health removed South Korean noodles and Turkish cookies from stores due to the detection of GE soy content.

PART B: POLICY

a) REGULATORY FRAMEWORK: Significant development of agricultural biotechnology is unlikely to occur in Kazakhstan without a comprehensive law in place. When the country was actively seeking entrance to the World Trade Organization (WTO), President Nazarbayev instructed the government to develop regulations permitting GE crops. The Ministry of Education and Science presented a draft law, "On State Regulation of Genetic Engineering Activities," (see the 2016 Kazakhstan Agricultural Biotechnology Report for an unofficial translation of the law). The draft law stalled in Parliament until Government Decree No 307 dated May 30, 2016[4] withdrew the draft, citing budgetary stress. Political forces are no longer focused on biotechnology, despite a push to modernize the agricultural sector and diversify grain production away from wheat and other traditionally grown crops.

The 2003 law "On Seed Farming" included provisions to allow the sowing of GE seeds. In November 2015, the law was amended[5] to become more restrictive. Article 13 of the law expressly prohibited commercial use and planting of crops derived from GE. While previously exceptions were in place to allow for field trials of GE seeds, they now can only be planted in laboratory greenhouses. This change 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 EAEU for use in food is done by Russia's Federal Service for Surveillance of Consumer Rights Protection and Human Welfare (*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 GAIN Agricultural Biotechnology Annual Report for the Russian Federation.

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

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

d) FIELD TESTING: Unless the government redrafts its law "On State Regulation of Genetic Engineering Activities," it is not expected that field trials will occur.
e) INNOVATIVE BIOTECHNOLOGIES: Kazakhstan has not addressed the regulation of plant products derived from genome editing. There has been little attention paid to these technologies, except in scientific circles.
f) COEXISTENCE: Not applicable since there is no mechanism for GE crop cultivation.
g) LABELING and TRACEABILITY: Labeling rules are covered by the Customs Union Technical Regulation on Labeling, 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. The regulation states that it is voluntary to label food products as non-GE.
h) MONITORING AND TESTING: In 2020, the National Expert Assessment Center of the Committee for Goods and Services Quality Control and Safety of Kazakhstan's Health Ministry detected GE content in instant noodles from South Korea and cookies from Turkey. The Center reported that lab testing identified GE soybeans in concentrations exceeding the 0.9 percent maximum, while the manufacturer labels did not contain information on GE content. Local government officials sought to locate these products and remove them from sale. This action appears to be part of the Center's regular testing program, though the details of testing frequency and methodology were not published.
i) LOW LEVEL PRESENCE (LLP) POLICY: According to EAEU regulations, food products may contain up to 0.9 percent of unapproved GE products.
j) ADDITIONAL REGULATORY REQUIREMENTS: The law "On Seed Farming" prohibits the planting of GE seeds.
k) INTELLECTUAL PROPERTY RIGHTS (IPR): The 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 WTO, the World Health Organization (WHO), Codex Alimentarius, and the International Plant Protection Convention. At the 40th session of the Codex Alimentarius Commission held in 2017, 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 agricultural biotechnology. Kazakhstan is in the process of becoming 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: Non-governmental organizations and industry groups have initiated very few information campaigns about agricultural biotechnologies or the products derived from them. The domestic press generally shares biotechnology information originating from Russia or Europe. Since Kazakhstan produces few crops for which GE varieties exist, this issue is not of great importance to producer groups or the Ministry of Agriculture. Although biotechnology feed components may prove necessary for the Ministry's targeted increase in livestock production, there has been little acknowledgement of this. There is a general lack of knowledge and understanding of agricultural biotechnology among producers, although most express a desire for learning how agricultural biotechnology can increase production and decrease costs. Privately, large grain producers and representatives of grain producer groups acknowledge the need to investigate the

benefits of agricultural biotechnology, however there is little will to lobby government officials to clarify rules which would enable this. The press has frequently written stories about Kazakhstan's potential for natural food production given its large territory and small population.

b) MARKET ACCEPTANCE / STUDIES: The public is apprehensive about purchasing products containing GE material. No known marketing studies exist on the acceptance of GE plants or related products.

CHAPTER 2: ANIMAL BIOTECHNOLOGY:

PART D: PRODUCTION AND TRADE

a) PRODUCT DEVELOPMENT: There are no known GE animal or livestock cloning projects under development.

b) COMMERCIAL PRODUCTION: The government has made increased cattle production a top agricultural priority and hopes to turn 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 GE animals or livestock clones.

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

e) TRADE BARRIERS: Kazakhstan has imported U.S. livestock in substantial quantities, and there are no known GE- or cloning-related trade barriers.

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 is no regulatory framework for developing animal biotechnology.

b) APPROVALS: Not applicable

c) INNOVATIVE BIOTECHNOLOGIES: Kazakhstan has not addressed the regulation of animals derived from genome editing.

d) LABELING AND TRACEABILITY: Not applicable

e) ADDITIONAL REGULATORY REQUIREMENTS: Not applicable

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

g) INTERNATIONAL TREATIES and FORUMS: Kazakhstan is member of the WTO, the WHO, 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.

h) 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.

CHAPTER 3: MICROBIAL BIOTECHNOLOGY

PART G: PRODUCTION AND TRADE

a) COMMERCIAL PRODUCTION: Not applicable
b) EXPORTS: The only microbial biotech-derived food ingredients exported by Kazakhstan are those traditionally used in the production of alcoholic beverages, dairy products, and processed products. Kazakhstan may export products containing microbial biotech-derived food ingredients.
c) IMPORTS: The only microbial biotech-derived food ingredients imported by Kazakhstan are those traditionally used in the production of alcoholic beverages, dairy products, and processed products. Kazakhstan may import products containing microbial biotech-derived food ingredients.
d) TRADE BARRIERS: Not applicable

PART H: POLICY

a) REGULATORY FRAMEWORK: Kazakhstan has not addressed issues related to microbial biotechnology in regulation. EAEU regulations limiting GE content to 0.9 percent in food and feed would also apply to microbial biotechnology.
b) APPROVALS: There is no existing legal framework to approve microbial biotechnology.
c) LABELING and TRACEABILITY: Labeling rules that apply to other forms of biotechnology would also apply.
d) MONITORING AND TESTING: Not applicable
e) ADDITIONAL REGULATORY REQUIREMENTS: Not applicable
f) INTELLECTUAL PROPERTY RIGHTS (IPR): Not applicable
g) RELATED ISSUES: Not applicable

PART I: MARKETING

a) PUBLIC/PRIVATE OPINIONS: Not applicable.

MARKET ACCEPTANCE/STUDIES: There are no known market studies on microbial biotechnology in Kazakhstan

Attachments:

No Attachments