

USDA Foreign Agricultural Service

GAIN Report

Global Agricultural Information Network

THIS REPORT CONTAINS ASSESSMENTS OF COMMODITY AND TRADE ISSUES MADE BY
USDA STAFF AND NOT NECESSARILY STATEMENTS OF OFFICIAL U.S. GOVERNMENT
POLICY

Required Report - public distribution

Date: 7/15/2014

GAIN Report Number: TR4024

Turkey

Agricultural Biotechnology Annual

2014 Turkey Agricultural Biotechnology Annual

Approved By:

Jess K. Paulson, Agricultural Attaché

Prepared By:

Nergiz Ozbag, Agricultural Specialist

Report Highlights:

Turkey amended its biotechnology regulation in May 2014, defining "contamination" and establishing a 0.9% threshold for approved traits in their approved field of use. The amendment is meant to reduce the liability from importing a product that contains low levels of biotech traits. Turkey's High Court announced a decision in December 2013 to suspend two biotech approvals (MON810 and MON88017xMON810). The court case may not conclude for some time, but products containing these traits will not be allowed to enter and products on the market have been withdrawn. Turkey has not approved any biotech traits for food use, nor are there any applications to approve the use in food.

Section I. Executive Summary:

Three prominent importers were charged with “biological terror” following the import of rice that contained trace amounts of soybean. Although the soybean is approved for animal feed, its presence in a food product is illegal under the Biosafety Law. Most of Turkey’s trade partners have shipments that have run afoul of Turkey asynchronous approvals for food and feed. The unpredictability has increased corporate risk, costs and contributed to increased public suspicion of biotech products.

The Biosafety Law went into effect on September 26, 2010. Since the publication of the Law, the Ministry of Food, Agriculture and Livestock (MinFAL) established an independent Biosafety Board consisting of mostly officials from various government ministries and some academicians. To date, importers of agricultural products have submitted applications for the approval of 22 corn, 3 soybean, 3 canola, one sugar beet and one potato starch transgenic events (all currently approved in the EU). Of these events, the Board has approved usage for only 3 soybean and 16 corn events for feed use.

However, in December 2013, Turkey’s High Court effectively suspended the approval of 2 corn events, MON810 (approved and cultivated in Europe) and MON88017xMON810.

In May 2014, MinFAL amended the regulation that implements the Biosafety Law to define “contamination”. MinFAL’s intention is to reduce the instances of prosecution for low level presence (LLP) in imports.

Section II: Plant and Animal Biotechnology

Chapter 1: Plant Biotechnology

Part A: Production and Trade

- a. Product Development:** Turkey's Biosafety Law permits the regulated study and development of plant biotechnology. However, the cumulative disincentives in the forms of quarantine control, approvals, liability, and prohibition on the cultivation of agricultural biotechnology have discouraged product development. The Law also mandates that for any research on biotech carried out in Turkey, the researcher needs to apply to the Biosafety Board in advance for permission to carry out the research. Although many academicians voiced concerns about this issue, and MinFAL has stated that the Law will not discourage research, it seems to have already had an impact on the willingness of the private and public sector to pursue research in this area. Turkish companies and universities have so far not developed any transgenic seeds.
- b. Commercial Production:** Article 5 of the Biosafety Law (Law No: 5977), adopted on March 26, 2010, bans the production of genetically modified animals and plants. Importation of transgenic seeds is also forbidden by the Law and by the seed circular, which is usually published in January of every year by MinFAL.
- c. Exports:** There is no commercial production of GE crops in Turkey and Turkey does not export GE crops to the United State or other countries.
- d. Imports:** Turkey continued to be an importer of bulk and semi-processed commodities in 2013. Cotton remained the top export commodity from the U.S. to Turkey in 2013. Soybeans and soybean meal are the second largest export commodity, but decreased dramatically from 2011 and 2012.

Due to insufficient domestic production and increasing demand, Turkey imports significant quantities of feed crops for its poultry and livestock sectors. The United States is among the top suppliers to the Turkish market.

In 2010, the Turkish Feed Millers Association submitted dossiers for the approval of three soybean events (feed use only) that are already approved in the European Union. These were: A2704-12, MON89788 and MON40-3-2. The Biosafety Board decided to review the applications under the simplified procedure, which is an expedited way of reviewing.

The Biosafety Board approved the above mentioned soybean events to be used as feed with a final approval decision published in the Official Gazette on January 26, 2011.

The Feed Millers Association, Turkish Poultry Meat Producers and Breeders Association, and the Turkish Egg Producers Association also applied in January of 2011 for the approval for feed use of the 22 EU-approved corn events. In December 2011, and April 2012, approvals for feed use were given for 16 out of 22 corn events with the remaining 6 events being rejected. As a result of the rejections, trade in corn and corn by-products have virtually ceased due to the difficulty in segregating the approved and rejected biotech events in the supply chain.

Trade in other higher valued products such as supplements and pet food has also been reduced by the Law, and there have been rejections of some products due to their transgenic content or very low presence of transgenic crops.

- e. **Food Aid Recipient Countries:** Turkey is not a food aid recipient country. However, Turkey rejected a shipment of food aid wheat for Syrian refugees that was to be milled by Turkish millers. Turkey's decision was based on the detection of a soybean or corn trait. This decision led to a second country who received a portion of that shipment to reject the wheat.

Part B: Policy

- a. **Regulatory Framework:** Turkey's regulation of agricultural biotechnology is governed by the Biosafety Law (Law No: 5977), adopted on March 26, 2010, and related implementing regulations. Import of transgenic agricultural products is only allowed after approval of each event for each use; for example: food, feed, industrial (and specific applications, such as: lubricant, ink, paint, biofuel, etc.).

Approval can only be granted after a detailed application (dossier) is submitted and reviewed by the Risk Assessment and Socio-Economic sub-committees, and then are approved by Biosafety Board. The Biosafety Board publishes decisions in the Official Gazette.

Following the adoption of the Biosafety Law, MINFAL's General Directorate of Agricultural Research and Development established a Biosafety Board. The Board has nine members and is the independent authority in charge of reviewing applications for the import of transgenic events. Most of the Board members are high-level bureaucrats from MinFAL, the Ministry of Health, the Ministry of Industry and Trade, the Ministry of Environment and the Ministry of Economy. It also includes academicians from Ankara University.

For every application, the Board establishes Risk Assessment, Socio- Economic and Ethical Committees from a "List of Experts". The members of the committees are kept secret. However, the List of Experts is public and contains 228 experts from Turkish academia. Each committee can review several applications at the same time.

MINFAL published two implementing regulations of the Biosafety Law on August 13, 2010. These were "Regulation on GMO and Products" and "Regulation on Working Principles of the Biosafety Board and the Committees".

According to the Law, either the gene owning technology companies or importers of transgenic crops are allowed to submit applications for the approval of a transgenic event. The reviews are to be completed within 270 days, or 90 days under the expedited procedure. The Biosafety Board determines which time line to use. MinFAL pressured the international companies that have developed agricultural biotech events to submit applications under the new Law as quickly as possible in order to avoid trade problems, however these companies expressed concerns about the severe yet unclear liability provisions in the Law, as well as the vagueness of the application procedures.

Currently there is no threshold for presence of unapproved transgenic events in food. As a result, trade has been severely restricted out of concern that dust or minor contamination of food products will lead to the rejection of shipments.

The liability provisions of the Law include harsh penalties including lengthy jail terms for unspecified "related parties". The Law also does not give explicit guidance about what documents are required and how they will be evaluated. The Law also bans inclusion of biotech ingredients in baby food or food supplements for young children, bans planting of biotech seeds, and contains onerous labeling and traceability requirements once the product arrives in Turkey. It also does not allow an application to be submitted in Turkey until it is already approved in the country of production, which guarantees asynchronous approvals.

On May 29, 2014, MinFAL published an amendment to the "Regulation on GMO and Its Products". The amendment defines "contamination" and establishes a 0.9% threshold at and under which products are considered "contaminated". However, the amendment does not clearly explain how "contamination" changes the ability to market products or commodities with unapproved biotech traits. Currently Turkey has approved only 14 of 22 corn and 3 of 4 soybean events for feed use; none for food use.

- b. Approvals:** Anyone may apply for the approval of a biotech trait in Turkey. Applicants are required to provide a dossier containing technical information and data on the trait to be approved, and pay the application fee of 50,000 Turkish Lira (approximately \$25,000) per event.

To date none of the technology owning companies have submitted an application to be reviewed by the Biosafety Board.

The application dossiers contained documents that were available online. The dossiers were reviewed under the Simplified Procedure as stated in the Law (expedited) due to the urgent need to import protein for the animal sector. Following the review process, three soybean events (A2704-12, MON40-3-2, and MON89788) were officially approved via the Official Gazette on January 26, 2011.

In January of 2011, applications for 22 corn events were submitted to the Biosafety Board for feed use by the Feed Miller's Association. All of these events are already approved in the European Union. These applications were reviewed under regular procedure. As a result of the review, the Biosafety Board approved 16 corn events on December 24, 2011 and on April 21, 2012. The Board rejected 6 corn events.

On April 25, 2013, the Board rejected 22 biotech corn varieties to be used in the ethanol sector, 3 biotech rapeseed varieties to be used in the feed sector, and 1 biotech sugar beet variety to be used in the feed sector.

On December 24, 2013, MinFAL acted on a decision by Turkey's High Court to suspend the approval of MON810 and MON88017xMON810 for animal feed. The two suspended traits were added to the list of unapproved traits port officials test for at import. Turkey conducts a

positive/negative test, and if positive, tests for each of the unapproved traits. Post understands that the ports will test for MON810 only, as MON88017 remains an approved trait; as opposed to MON88017xMON810, which is a stacked trait.

Please see the table below for a full list of approvals and rejections.

Table-2: Status of Applications for food and feed use

Commodity	Event	FOR FEED USE	FOR FOOD USE
Soybean	A2704-12	Accepted	Application withdrawn by applicant
Soybean	MON89788	Accepted	“
Soybean	MON40-3-2	Accepted	“
Corn	Bt11	Accepted	“
Corn	DAS1507	Accepted	“
Corn	DAS59122	Accepted	“
Corn	DAS1507xNK603	Accepted	“
Corn	NK603	Accepted	“
Corn	NK603xMON810	Accepted	“
Corn	MON88017	Accepted	“
Corn	DAS59122xNK603	Accepted	“
Corn	GA21	Accepted	“
Corn	MON 810	Suspended by the High Court	“
Corn	MON 863	Rejected	“
Corn	MON 863x NK603	Rejected	“
Corn	MON 863xMON810	Rejected	“
Corn	MON 89034	Accepted	“
Corn	MIR604	Rejected	“
Corn	MON 863x MON810xNK603	Rejected	“
Corn	MON89034 x NK603	Accepted	“
Corn	Bt11 x GA21	Accepted	“
Corn	59122 x 1507 x NK603	Accepted	“
Corn	MON88017 x MON810	Suspended by the High Court	“
Corn	DAS1507 x 59122	Accepted	“
Corn	T25	Rejected	“

In January, 2011, the Federation of the Food and Beverages Associations also submitted applications for all EU approved soybean, corn, canola and potato events for food use. However, as a result of intensive pressure from NGOs and the media, the Federation withdrew their applications for all events for food use. Currently the last dossiers waiting to be approved by the Board are for industrial use purposes such as plastics.

c. **Field Testing:** Turkey does not have any field testing of products derived from agricultural

biotechnology.

- d. Stacked Event Approvals:** Turkey treats stacked events as novel and requires their approval separate from the approval of each individual event in the stack.
- e. Additional Requirements:** Article 5(1)d of the Biosafety Law prohibits the use of GE “and products thereof in baby food and infant formulas, follow-on formulas and cereal-based supplementary foods for babies and young children.” Article 16(1) of the Regulation on Genetically Modified Organisms and Products Thereof requires MinFAL’s permission for each transit passage of products containing GE.
- f. Coexistence:** The prohibition against cultivation of agricultural biotechnology doubles as Turkey’s coexistence policy.
- g. Labeling:** According to the Biosafety law and regulations, any imported biotech food or feed above the labeling threshold set by the Ministry (in January 2011 this threshold was given as 0.9% via an internal Agriculture Ministerial Directive) must be labeled. Traceability clauses in the Law and implementing regulations require that records be kept for a minimum of 20 years, detailing the unique identifier of the gene, quantity, supplier, and purpose of use, each time a product is processed or handled, from the time of import to the time of distribution to the market.

The implementing regulations also require that “GMOs and products thereof are processed and stored in separate lines. In the event that this is not possible, the production lines and storage facilities must be cleaned by the interested parties in a manner to prevent any contamination with GMOs and products thereof and the circumstance must be committed to records.”
- h. Trade Barriers:** It is a point of pride for Turkey that the Biosafety Law is more restrictive than regulations in the EU. Turkey has zero tolerance for the detection of unapproved biotech traits. Imports declared as containing GE are tested at a rate of twenty percent and products without declaration are tested at a rate of one hundred percent. Turkey does not accept point of origin testing. The Biosafety Law contains liability clauses that penalize non-compliance with large fines and five to twelve years in prison. The approval process is based on the risk and socio-economic assessment of the committees under the Biosafety Board. Turkey also approves traits separately for feed, food and industrial products, which have led to instances of low level presence (LLP) and prosecution under the Biosafety Law’s liability provisions.
- i. Intellectual Property Rights (IPR):** Post is unaware of any IPR problems in Turkey as the cultivation of GE crops is prohibited under the Biosafety Law. The Foreign Commercial Service produces a report “Doing Business in Turkey: 2013 Country Commercial Guide for U.S. Companies” that contains information on the protection of IPR in Turkey.
- j. Cartagena Protocol Ratification:** Turkey ratified the Cartagena Biosafety Protocol on October 24, 2003 and entered it into force on January 24, 2004.

Turkey is a member of several international organizations dealing with plant protection and plant health like the European and Mediterranean Plant Protection Organization (EPPO), the

Organisation for Economic Co-operation and Development (OECD), the Food and Agriculture Organization (FAO) International Plant Protection Convention (IPPC), and Codex.

- k. Related Issues:** Turkey's Biosafety Law requires approval for use of products derived from agricultural biotechnology, excluding only pharmaceuticals and cosmetics. Therefore, industrial uses of products derived from plant biotechnology must also be approved separately. In April 2013 Turkey rejected all corn traits for use in the production of ethanol.
- l. Monitoring And Testing:** Turkey tests imports that contain ingredients derived from commodities that have genetically engineered varieties at a rate of twenty percent for products declared as containing GE, and one hundred percent for products without declaration. Turkey utilizes a rapid response PRT tests to detect 35S promoters and NOS terminators. Import tests are conducted by approved local laboratories and the National Reference Laboratory in Ankara retests when results are contested. Products that receive a positive detection prior to "nationalization" (customs clearance) may be re-exported. Positive detections for products that have cleared customs are prosecuted for violation of the liability provisions of the Biosafety Law.
- m. Low Level Presence Policy:** Turkey has a zero tolerance for unapproved LLP in food and industrial products, subject to the liability provisions of the Biosafety Law. On May 29, 2014, MinFAL published a change to the regulation that implements the Biosafety Law to define "contamination" and establish a threshold of 0.9% for approved genes in their intended use. Because genes are approved only for feed use, the threshold does not provide any utility to detections in food. MinFAL has yet to clarify the implementation of the definition or threshold. MinFAL intends for the definition and threshold to provide some measure of security from prosecution as "contamination" means unintentional and beyond the control of the domestic party involved (importer, wholesaler, distributor, retailer, etc...).

Part C: Marketing

- a. Market Acceptance:** The fear of biotechnology by the Turkish public, producers, retailers and consumers continues. This is mainly due to successful anti-GMO campaigns run by local and international NGOs such as the Chamber of Agricultural Engineers, Greenpeace and the Friends of the Earth, since 2008.

Although public sentiment is resoundingly anti-biotech, Turkey is import-dependent for plant-based protein for animal feed. However, the restrictions on the use of biotech soybeans prevents industry from crushing (soybean oil can't be used for any purpose but animal feed), resulting in a decrease in soybeans and an increase in soybean meal imports in 2013.

- b. Public/Private Opinions:** As a result of these campaigns and one-sided reporting in the media, public and private opinion in Turkey are dominated by information on possible hazards from the consumption of products derived from agricultural biotechnology. The public commonly accepts a link between GMOs and cancer as established.

- c. **Marketing Studies:** To date, Post is unaware of any marketing studies that have evaluated Turkish consumer sentiment towards products derived from agricultural biotechnology. Graham Brookes of PG Economics in Great Britain published the study “Economic impacts of the Biosafety Law and implementing regulations in Turkey on the Turkish importing and user sectors” in May 2012. The study concludes that “...the on-going annual cost can reasonably be expected to be between \$0.7 billion and \$1 billion and could be higher.”

Part D: Capacity Building and Outreach

- a. **Activities:** Over the last decade FAS-Ankara has conducted numerous policy-maker, academic and journalist training programs. FAS-Ankara expanded Turkey’s exposure to the regulatory approaches of other countries. FAS took a group of Turkish officials to visit the European Food Safety Authority (EFSA) and brought an expert from Japan to explain how and why they regulate agricultural biotechnology.
- b. **Strategies and Needs:** Turkey’s government officials, including the Minister of Agriculture and Prime Minister, have made numerous remarks questioning the safety of products derived from agricultural biotechnology. Three instances of LLP received widespread media coverage in spring 2013 under the headlines and official charges of “Biological Terror”. This coverage resulted in public statements by the Prime Minister attesting to the need for policies that prevent LLP from placing legitimate business leaders in prison. Despite these statements, the government has not made progress in back-tracking from years of public fear-mongering.
- c. There is a need in Turkey for an honest public dialogue on the use of biotechnology in agricultural production and food and feed products. Dialogue has, to date, been limited to sensationalist claims about the hazards of biotechnology. The scientific condemnation of a study linking GE to cancer received no media coverage, leaving the impression of the original claims in the public’s understanding of the technology. Turkish experts carry greater credibility with the public than do those from the United States, industry, and even the European Union. Too few experts have been willing to face the public scrutiny of NGO campaigns and media derision, but need to be encouraged to foster the necessary public dialogue. FAS Ankara plans to continue providing the Biosafety Board with information about and contacts in the regulatory authorities of other countries.

Chapter 2: Animal Biotechnology

Part E: Production and Trade

- a. **Product Development:** Article 5 of the Biosafety Law (Law No: 5977), adopted on March 26, 2010, bans the production of genetically modified animals and plants.

- b. Commercial Production:** Banned.
- c. Exports:** Banned.
- d. Imports:** Banned.

Part F: Policy

- a. Regulation:** Turkey's regulation of agricultural biotechnology is governed by the Biosafety Law (Law No: 5977), adopted on March 26, 2010, and related implementing regulations. Import of transgenic agricultural products is only allowed after approval of each event for each use. For more information, please see Chapter 1 Part B.
- b. Labeling and Traceability:** Products derived from approved GE animals would require a label indicating that it is or contains GE.
- c. Trade Barriers:** Not applicable.
- d. Intellectual Property Rights (IPR):** Post is unaware of any IPR problems in Turkey as the cultivation of GE crops is prohibited under the Biosafety Law. The Foreign Commercial Service produces a report "Doing Business in Turkey: 2013 Country Commercial Guide for U.S. Companies" that contains information on the protection of IPR in Turkey.
- e. International Treaties/Fora:** Turkey is a member of several international organizations dealing with plant protection and plant health like the European and Mediterranean Plant Protection Organization (EPPO), the Organisation for Economic Co-operation and Development (OECD), the Food and Agriculture Organization (FAO) International Plant Protection Convention (IPPC), and Codex.

Part G: Marketing

- a. Market Acceptance:** Not applicable.
- b. Public/Private Opinions:** Turkish public opinion is skeptical of benefits from new agricultural technologies, in general.
- c. Market Studies:** Not applicable.

Part H: Capacity Building and Outreach

- a. Activities:** None.
- b. Strategies and Needs:** As with plant biotechnology, Turkey needs a public dialogue on the benefits and credible risks of animal biotechnologies. Key to a productive dialogue is the availability and circulation of credible studies on the benefits and risks of these technologies. A

lack of familiarity with the topic also hinders the ability of the media to report on it accurately and distribute credible information. Modern communication, such as social media, could also be a means for the distribution of credible information.