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GAIN Report

Global Agricultural Information Network

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Biotechnology

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Report Highlights:

Following the implementation of the Biosafety Law on September 26, 2010, three soybean events and 16 corn events were approved for import for **feed use** only. Currently applications for import of EU approved corn and canola events as well as soybean events for food use are being reviewed. A threshold for unapproved events is established as 0.1% for feed.

Section I. Executive Summary:

Public opposition to agricultural biotechnology increased significantly in 2011 mostly due to campaigns run by NGOs via print and visual media. A number of pseudo- science documents were published by media in 2011. In Turkey, biotechnology is not well understood.

The Biosafety Law went into effect on September 26, 2011. Since the publication of the Law, the Ministry of Food, Agriculture and Livestock established an independent Biosafety Board, consisting of mostly bureaucrats and some academicians. To date importers of agricultural products submitted applications for approval for **food and feed** of 22 corn, 3 soybean, 3 canola, one sugar beet and one potato starch transgenic events (all currently approved in the EU).

Approval for feed and food use must be applied for separately. Of these events, the Board has approved usage for only 3 soybean and 16 corn events for **feed use**. The rest of the applications are still under review.

The EU recently adopted a 0.1% threshold for unapproved* events in feed material. In September 2011, the Biosafety Board adopted the same threshold for feed.

*Unapproved events refer to events that are not approved but that are currently being reviewed by the Biosafety Board.

Section II. Plant Biotechnology Trade and Production: Production

The Turkish Grand National Assembly adopted the Biosafety Law (Law No: 5977) on March 26, 2010. The law included a transition period of 6 months, so it was implemented on September 26, 2010.

According to Article-5 of the Law, production of genetically modified animals and plants is banned. Importation of transgenic seeds is also forbidden by Law and by the seed circular, published usually in January of every year by Ministry of Food, Agriculture and Livestock (MINFAL).

Production of transgenic crops was never allowed in Turkey, but there are rumors that some producers acquired transgenic seeds (mostly cotton and corn) and planted them illegally in the past. However, following the enforcement of the law, unauthorized plantation became more risky since the punishments for unauthorized planting included in the Law are severe.

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 on the research. Many academicians voiced concerns about this issue. Although MINFAL has stated that the Law will not discourage research, it seems to already be affecting willingness of the private and public sector to pursue further research in this area. Turkish companies and universities have so far not

developed any transgenic seeds.

Trade

Turkey continued to be an importer of bulk and semi- processed commodities in 2011. With \$1.2 billion in value, cotton was again the top export commodity from the US to Turkey in 2011 as well. Soybeans were the third largest export commodity in 2011. The United States is among the top suppliers to the Turkish market.

Due to insufficient domestic production and increasing demand, Turkey imports significant quantities of feed crops for its poultry and livestock sectors.

In 2010, the Turkish Feed Millers Association submitted dossiers for 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. Due to the urgent need for these products by the animal sector, the Biosafety Board decided to review the applications under the simplified procedure, which is an expedited process designed to reach a conclusion within 90 days as opposed to the 270 days allowed under the regular review.

Finally the Biosafety Board approved the above mentioned soybean events to be used as feed. Following the publishing of the final approval decision on January 26, 2011 on the Official Gazette, imports of soybean resumed again in February 2011.

In January of 2011, the Feed Millers Association also applied for **feed use** approval for 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 did not resume for corn and corn by-products due to the difficulty in segregating the biotech events in the supply chain.

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

Section III. Plant Biotechnology Policy:

Unfortunately, in Turkey agricultural biotechnology is not well understood. The major reason for it is because massive anti-GMO campaigns run by some NGOs with the support of media. This fear was exacerbated by early attempts by the Ministry of Agriculture to regulate the technology in 2009.

Implementation of the Biosafety Law began on September 26, 2011. Following implementation of the Law and the related implementing regulations, import of transgenic agricultural products are only allowed after approval of each event.

Approval can only be granted after a detailed application (dossier) is submitted and reviewed by the Biosafety Board, its sub-committees, and then approved by the Ministry of Food, Agriculture and Livestock (MINFAL)

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 importation of transgenic events. Most of the Board members are high-level bureaucrats from the Ministry of Agriculture, Ministry of Health, Ministry of Industry and Trade, 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 approximately 180 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. Prior to implementation of the law, the Turkish Ministry of Food, Agriculture and Livestock 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. To date none of the technology owning companies submitted any applications to be reviewed by the Biosafety Board. Since Turkish feed millers depend on imported ingredients, the Turkish Feed Millers Association immediately submitted applications for the import of three EU approved soybean events for **feed use** only in October, 2010.

Without the support of the seed companies, the Feed Millers' Association's dossiers mainly 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** only 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. Please see below table for full list of approvals and

rejections.

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

Commodity	Event	Status of Application/ FEED USE	Status of Application/ FOOD USE
Soybean	A2704-12	Accepted	Under review
Soybean	MON89788	Accepted	Under review
Soybean	MON40-3-2	Accepted	Under review
Corn	Bt11	Accepted	Under review
Corn	DAS1507	Accepted	Under review
Corn	DAS59122	Accepted	Under review
Corn	DAS1507xNK603	Accepted	Under review
Corn	NK603	Accepted	Under review
Corn	NK603xMON810	Accepted	Under review
Corn	MON88017	Accepted	Under review
Corn	DAS59122xNK603	Accepted	Under review
Corn	GA21	Accepted	Under review
Corn	MON 810	Accepted	Under review
Corn	MON 863	Rejected	Under review
Corn	MON 863x NK603	Rejected	Under review
Corn	MON 863xMON810	Rejected	Under review
Corn	MON 89034	Accepted	Under review
Corn	MIR604	Rejected	Under review
Corn	MON 863x MON810xNK603	Rejected	Under review
Corn	MON89034 x NK603	Accepted	Under review
Corn	Bt11 x GA21	Accepted	Under review
Corn	59122 x 1507 x NK603	Accepted	Under review
Corn	MON88017 x MON810	Accepted	Under review
Corn	DAS1507 x 59122	Accepted	Under review
Corn	T25	Rejected	Under review

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** only. Currently the Risk Assessment and Socio-Economic Committees of the Board are reviewing these applications. The Board decided to review all these applications under the regular procedure. The reason for the decision to use the regular as opposed to the simplified procedure was not explained.

The Board is under pressure from the food industry to set a low level presence threshold for existence of unapproved varieties in food. In September, 2011, the Board adopted a rule very similar to the new threshold adopted by the EU's 0.1% threshold for unapproved events in feed

material. It is significant to mention that “unapproved” refers only to events that are already submitted to the Biosafety Board for review and no decision is made yet.

Currently there is no threshold for presence of unapproved transgenic events in food. As a result, trade has been severely restricted out of concerns that dust or minor contamination of identity preserved (IP) products will lead to 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 once the product does arrive 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.

The Law is not expected to be revised any time soon, as the topic is too controversial and any change to the Law would require debate and voting in the Parliament. The implementing regulations connected to the Law are rather easy for MINFAL to amend; however, they may not conflict with any provisions of the Law.

Section IV. Plant Biotechnology Marketing Issues:

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

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 .9% via an internal Agriculture Ministerial Directive) must be labeled. Traceability clauses in the Law and implementing regulations require that records to be kept for a minimum of 20 years detailing the unique identifier of the GMO, 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.”

Section VI. Animal Biotechnology:

There is no discussion about animal biotechnology in Turkey however the Biosafety Law presumably covers this realm.

Section VII. U.S. Exports:

Table-1: U.S. Agricultural Exports to Turkey

U.S. Agricultural Exports to Turkey						
	2006	2007	2008	2009	2010	2011
Product	Value in Thousand US Dollars					
Cotton	512,417	767,115	536,325	487,301	860,904	1,180,291
Soybeans	139,493	126,102	213,738	341,540	250,427	127,999
Feeds and Fodders	27,976	96,444	238,466	88,989	89,067	21,295
Soybean Meal	20,650	41,553	52,202	79,171	59,445	46,731
Vegetable Oils (Ex Soybean)	58,294	79,392	110,515	52,712	45,957	42,368
Other Bulk Commodities	15,228	19,372	15,911	33,741	25,913	13,344
Other Consumer Oriented	15,441	11,586	16,252	16,351	16,435	26,386
Other Intermediate Products	12,150	16,269	13,663	7,785	11,506	12,407
Planting Seeds	5,603	6,242	12,939	10,096	9,104	16,102
Coarse Grains	0	77,476	73,038	4,073	2,718	0
Pet Foods	4,774	4,707	5,646	5,837	2,703	1,224
Snack Foods	1,670	825	2,520	3,219	1,564	1,781
Soybean Oil	2,203	36	149	2,060	79	2,803
Breakfast Cereals	22	62	25	132	44	11
Subtotal product possibly containing biotech	816,551	1,247,181	1,291,389	1,133,007	1,375,866	1,492,742
All others	224,276	265,976	454,958	410,695	774,286	1,042,838
Total exports	2,040,827	1,513,157	1,746,347	1,543,702	2,150,152	2,535,580