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GAIN Report

Global Agricultural Information Network

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Report Highlights:

While it is still the second largest grower of genetically engineered (GE) corn in Europe, Portugal's area planted to genetically engineered corn continues to decline. The reduction in the country's total corn area, along with the increased demand of GE-free corn by the food industry has decreased the GE corn area. Since 2015, Portugal has been less consistent in following EFSA's advice in the EU approval process for GE events.

Disclaimer: Portugal, as a member of the European Union (EU), conforms to EU directives and regulations on biotechnology. It is therefore recommended that this report be read in conjunction with the latest [EU-28 Agricultural Biotechnology Annual report](#).

Acronyms used in this report:

ANPROMIS: Portuguese Association of Corn and Sorghum Producers

ANSEME: National Association of Seed Breeders

APA: Portuguese Agency of Environment

CGF: Corn Gluten Feed

DDGS: Distillers' Dried Grains and Solubles

DGAV: Directorate General for Food and Veterinary Affairs

DGS: Directorate General for Health Issues

EC European Commission

EFSA: European Food Safety Authority

EU European Union

FAS Foreign Agricultural Service

GATS: Global Agricultural Trade System

GE Genetically Engineered

GMO Genetically Modified Organism

GTA Global Trade Atlas

Ha Hectares

IB Innovative Biotechnologies

MS Member State(s)

MT Metric ton (1,000 kg)

N/A Not available

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Section I: Executive Summary

As in other European Member States, the limited possibilities for new GE crops to be made commercially available discourage investment in GE crop research in Portugal.

Portugal is the European Union's (EU's) second largest grower of genetically engineered (GE) corn after Spain. While planting year 2017 saw a decline in total area planted to corn as a result of tight crop margins, area planted to MON810 remained fairly stable.

Possibilities of further expansion for the country's GE crop area are limited. On one hand, given that just one insect resistance event is available; Portugal's GE area is limited to the land where the target insect, the European corn borer, has an impact in final yields. Another factor limiting GE crops from further expansion in Portugal is the food industry policy to avoid the "Contains GE products" labeling.

Portugal has fully implemented all EU regulations in its territory and by allowing cultivation of GE corn, it preserves both farmers' and consumers' choices. In the decision making process, The Portuguese Administration has traditionally followed a science-based approach; however, since 2015, Portugal has been less consistent in following EFSA's advice in the EU approval process for GE events.

Portugal imports on average about three million MT of grains and about 875,000 MT of soybeans and 170,000 MT of soybean meal because its domestic feed grain production is not large enough to meet livestock industry demand. The majority of Portuguese feed and food chain links strongly support plant biotechnology as a means of achieving higher competitiveness. Additionally, feed producers and livestock breeders defend their right to compete in equal conditions and be able to produce using the same technology as their main competitors. Consequently, at the July 17-18, 2017 EU Council of Ministers meeting, the government of Portugal was one of the 13 European Member States that did not sign the [European Soya Declaration](#) put forward by the German and Hungarian delegations.

United States agricultural exports to Portugal consist mainly of bulk commodities, which accounted for over 50 percent of the U.S. export value in the period 2006-2016. Soybeans are the most important traded products, representing nearly one third of total Agricultural imports from the United States. The start of GE corn plantings in the United States in 1998 caused a drastic decline in U.S. corn exports to Portugal; because the EU had not yet approved these GE events (asynchronous approval). Biotechnology adoption in other grain exporting countries is having similar effects in trade flows. The origin of the corn imports has changed throughout the years, with Ukraine gaining market share at the expense of biotechnology adopters such as United States, Brazil, and Argentina.

Section II: Plant and Animal Biotechnology

Chapter 1: Plant Biotechnology

Part A: Production and Trade

a) PRODUCT DEVELOPMENT

FAS Madrid is unaware of any GE crops under development in Portugal.

b) COMMERCIAL PRODUCTION

MON810 corn has been commercially grown in Portugal since 2005 and at present Portugal is the EU's second largest producer of Bt corn, after Spain. Total area planted to corn varies every year depending on water availability, price, and competition from alternative crops.

Total area planted to corn continues in decline since MY2014/15. Lower crop margins compared to alternative crops, and to a lesser extent crop diversification established by EU's greening measures¹, continue to force total corn area downward (**Table 1**). Additionally, a severe drought during the **MY2017/18** growing season discouraged planting. This situations combined have reduced total corn area in Portugal to historically low levels.

Table 1. Portugal's Corn Area*

Marketin	MY2011/1	MY2012/1	MY2013/1	MY2014/1	MY2015/1	MY2016/1	MY2017/1
Total	137	143	147	137	126	118	116

Source: ANPROMIS.

**Continental area of grain corn and silage corn is considered.*

Area planted to Bt corn in Portugal increased steadily until **2012** (**Table 2 and Graph 1**), when it reached its highest level (See [GAIN Report SP1234](#)). Between **2013** and **2014** Bt corn area only suffered slight variations staying around 8,250 Ha. From **2015** until present, poor crop margins have decreased the total corn area, and thus the GE corn area.

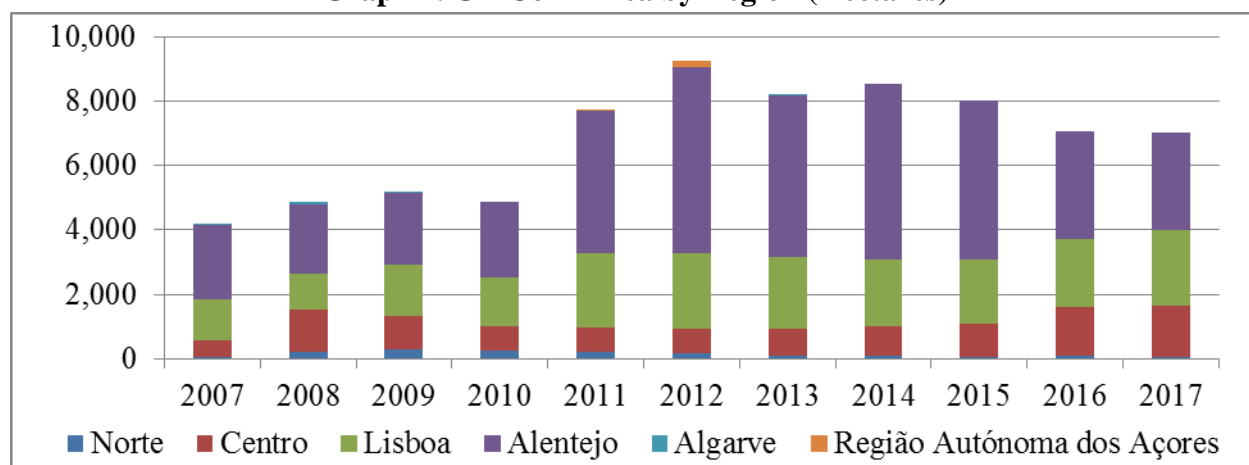
¹ A large part of the support received by farmers (30%) is linked to greening measures. To comply with greening measures, crop diversification has to be observed. Farms between 10 and 30 ha must grow at least two different crops, and farms over 30 ha must grow at least three different crops in their arable land, which ultimately introduces slight variations in areas where monoculture is carried out.

Table 2. Area of GE corn by Region (Hectares)

Region	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Norte	62	190	298	248	209	165	85	78	60	100	45
Centro	490	1,35	1,01	765	758	774	853	933	1,01	1,48	1,60
Lisboa	1,29	1,09	1,60	1,51	2,29	2,32	2,21	2,07	2,00	2,13	2,33
Alentej	2,30	2,17	2,24	2,34	4,46	5,79	5,04	5,45	4,94	3,34	3,04
Algarve	51	42	42	-	-	13	8	0	0	0	0
Açores	-	-	-	-	3	208	0	0	0	0	0
Total	4,20	4,85	5,20	4,86	7,72	9,27	8,20	8,54	8,01	7,06	7,03

Source: DGAV.

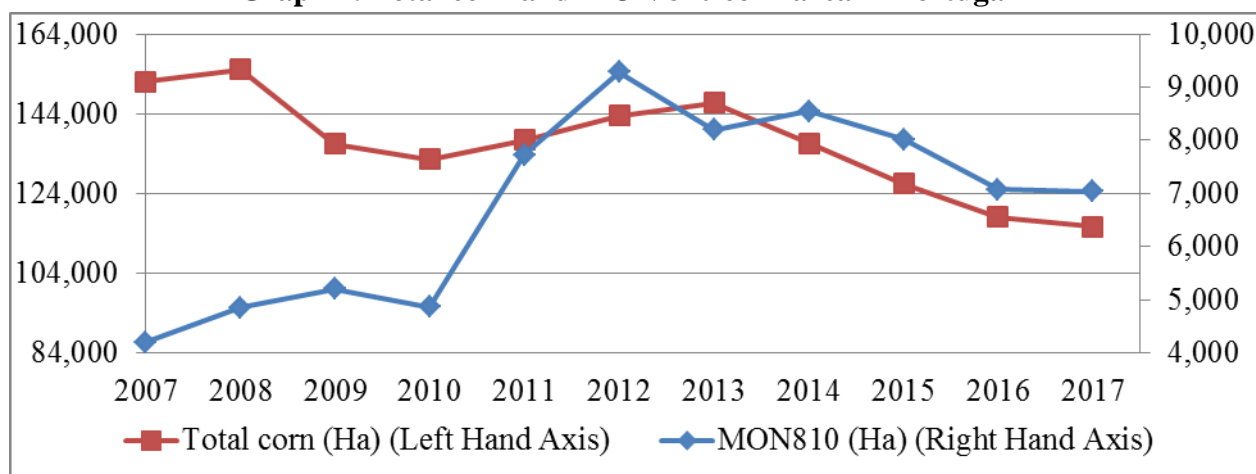
Graph 1. GE Corn Area by Region (Hectares)



Source: FAS Madrid based on DGAV data.

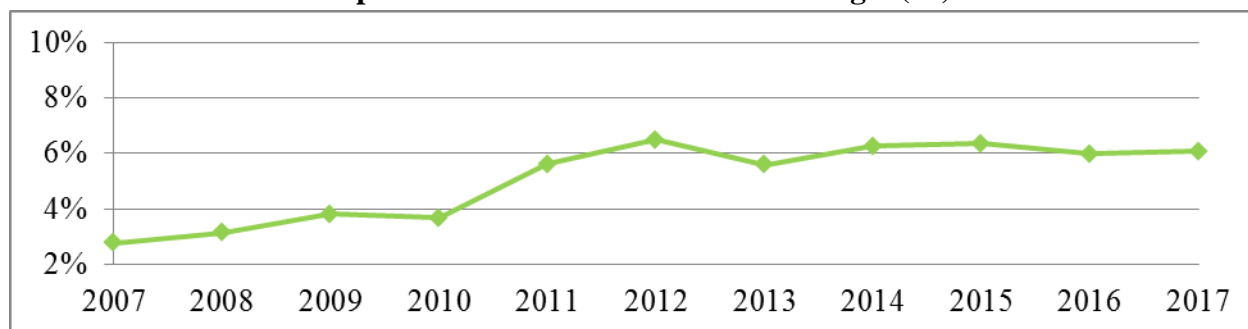
In 2017 Bt corn area in Portugal remained fairly stable compared to previous year's level, despite the registered in total area planted to corn (- 2 percent) (**Graph 2**).

Graph 2. Total corn and MON 810 corn area in Portugal*



Source: FAS Madrid based on DGAV and ANPROMIS data.
 *Continental area of grain corn and silage corn is considered.

Graph 3. MON 810 Area Share in Portugal (%)*

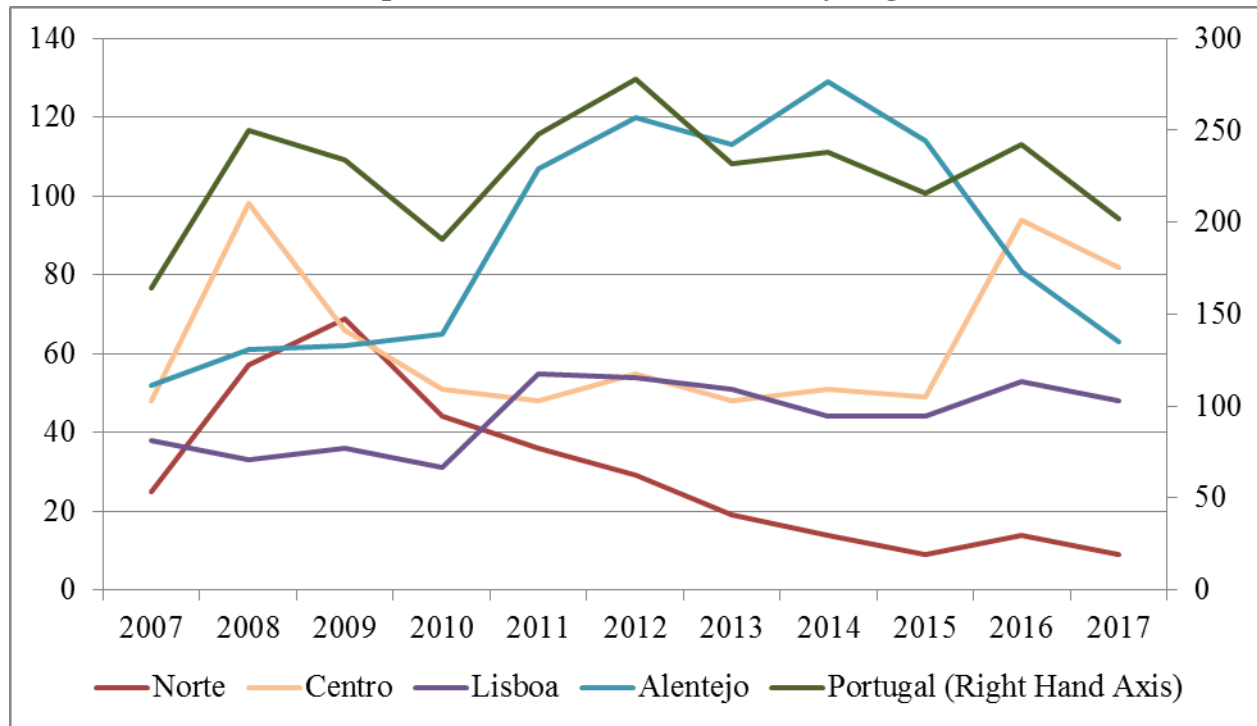


Source: FAS Madrid based on DGAV, ANPROMIS and INE data.
 *Continental area of grain corn and silage corn is considered.

Further expansion of GE corn plantings in Portugal is limited by a number of factors:

- As MON810 is the only GE event approved for cultivation in the EU, the use of GE corn is restricted to those areas where corn borer represents a problem. Especially in a small crop margins scenario, only farmers facing a real threat of the pest would invest in the technology in the seed. Approvals of new traits for cultivation could raise the interest for GE crops in other areas. As shown in **Graph 4**, since 2012, the number of farmers growing GE corn follows a downward trend.

Graph 4. Number of Notifications² by Region



Source: FAS Madrid based on DGAV

- The impact of corn-borer in final yields of corn intended for silage is smaller, hence, the use of GE corn is rather limited (See **Table 3** and **Graph 5**). For instance, in the Norte region, where forage corn represents over 50 percent of the total corn area, the share of GE corn is below one percent. Meanwhile, in Alentejo, where the share of grain corn is far more representative, on average the GE corn share goes up to nearly 23 percent.

²Farmers growing GE corn.

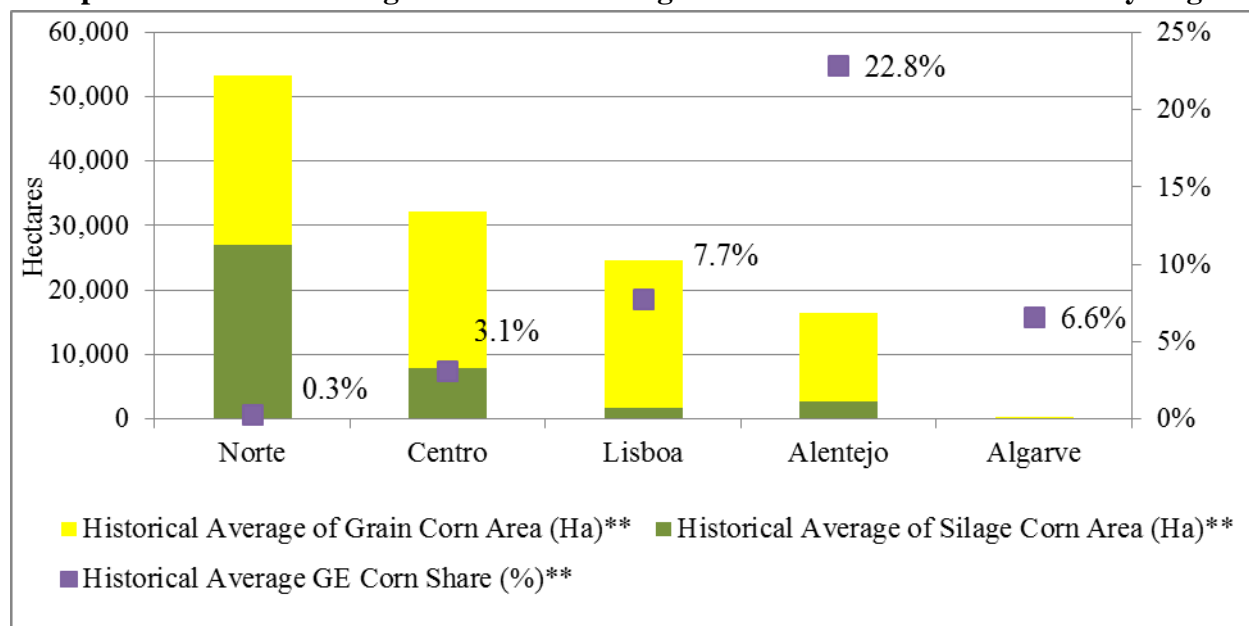
Table 3. Farm Size, GE, Grain and Silage Corn Area and GE Corn Share by Region

Region	Average Farm size (Ha)*	Historical Average of GE Corn Area (Ha)**	Historical Average of Grain Corn Area (Ha)**	Historical Average of Silage Corn Area (Ha)**	Historical Average GE Corn Share (%)**
Norte	5.8	140	26,217	27,009	0%
Centro	5.4	1,004	24,389	7,871	3%
Lisboa	11.5	1,899	22,867	1,700	8%
Alentejo	51	3,742	13,793	2,610	23%
Algarve	7.1	14	198	17	7%
Continental Portugal	12.7	6,798	87,464	39,207	5%

Source: INE, DGAV and ANPROMIS data

*based on Survey 2009 data. **2007-2017 average

Graph 5. Historical Average of Grain and Silage Corn Area vs GE Corn Share by Region



Source: FAS Madrid based on **Table 3** data.

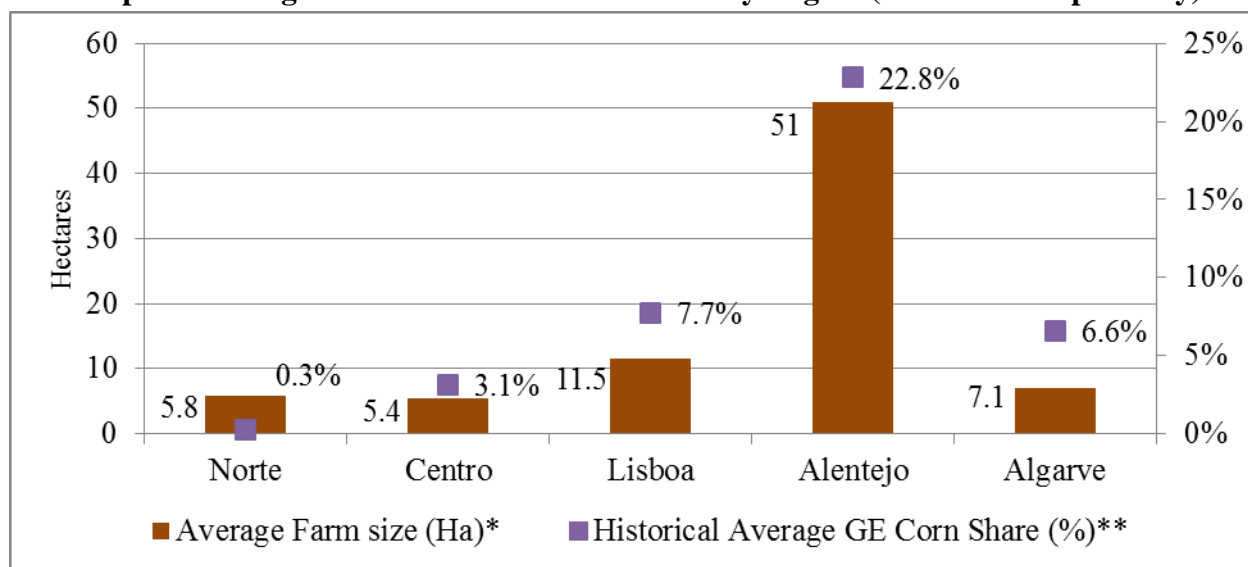
**2007-2017 average

- The use of corn for food purposes also sets a limit to GE corn expansion. Food manufacturers in Portugal continue to avoid the “Contains GMOs” wording in labels. When given the option, farmers prefer selling their corn to the food industry at a better price than to the feed industry. Since 2015, a new grit production plant intended to mill corn for food use (located in Spain, but close to the Portuguese border) may have contributed to the reduction of GE corn share in favor to higher

conventional corn plantings, particularly in the Lisboa and Alentejo region where the large majority of the GE corn is grown, and its share is higher.

- The small average farm size that prevails throughout the country also sets a barrier for GE corn crop expansion. In other to fulfill coexistence rules, smaller farmers need to come to agreements to create GE areas. Bigger farmers can implement coexistence within their farm. **Graph 6** shows how in Alentejo Region, where farm size is bigger, the share of GE corn is higher. (See Coexistence Section for additional information)

Graph 6. Average Farm Size vs GE Corn Share by Region (Ha and % respectively)



Source: FAS Madrid based on **Table 3** data.

**based on Survey 2009 data. **2007-2017 average*

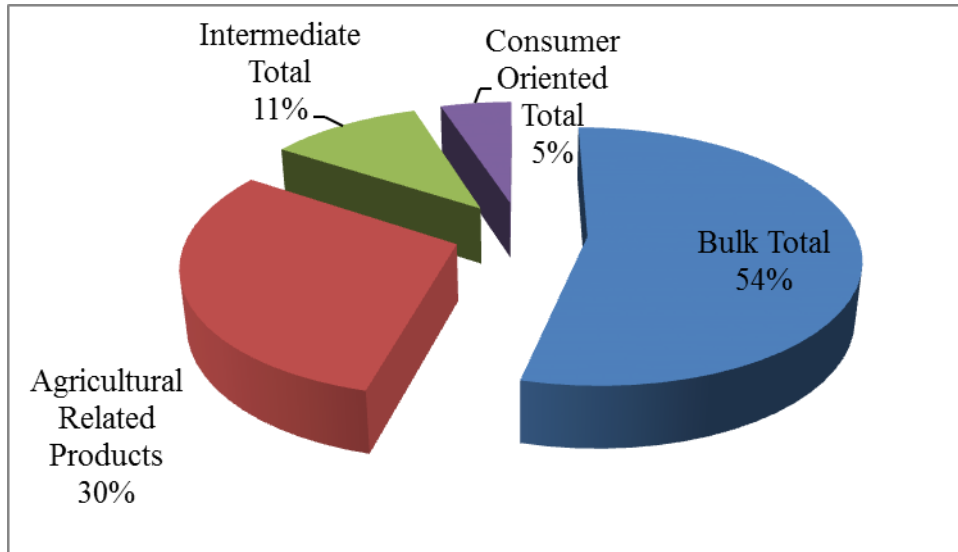
c) EXPORTS

Portugal is a net importer of grains and oilseeds as the domestic production is not sufficient to meet the livestock sector demand. Exports of GE product are negligible, as the feed industry uses the production internally.

d) IMPORTS

U.S. agricultural exports to Portugal consist mainly of bulk commodities, which accounted for nearly 54 percent of the U.S. exports value in the period 2006-2016. Soybeans are nearly 25 percent of total agricultural trade, the most important traded product (**Graph 7**).

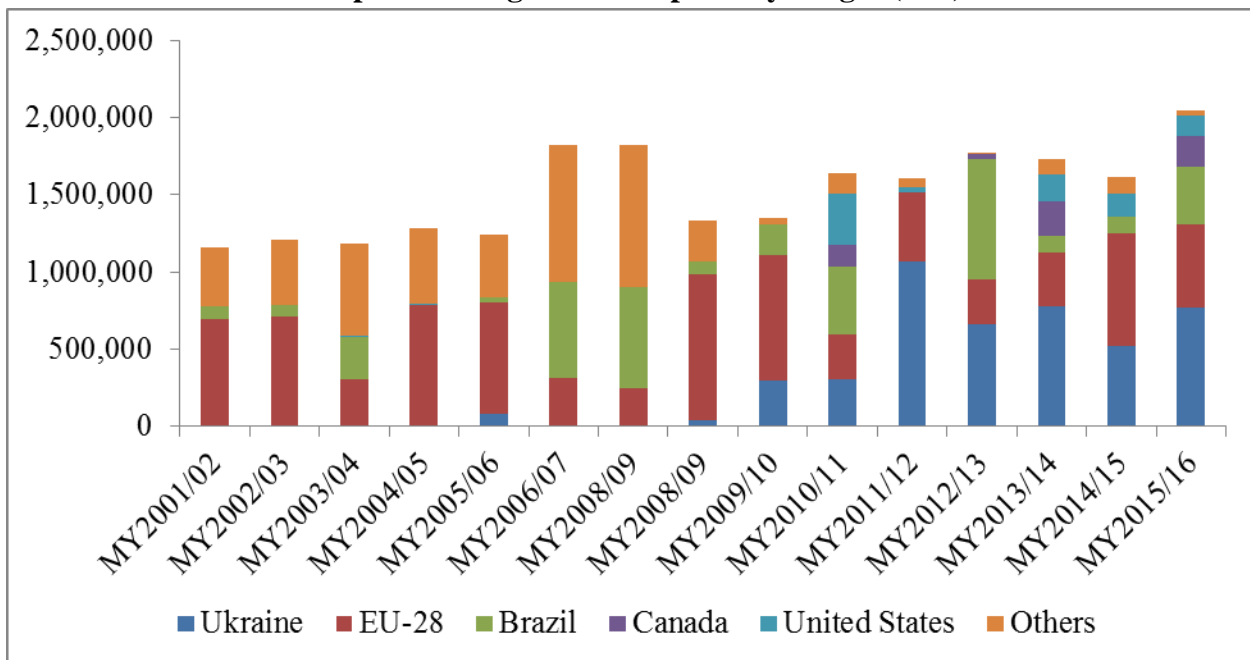
Graph 7. U.S. Agricultural Exports to Portugal in value



Source: FAS Madrid based on GATS data.

The expansion of GE crop production in traditional grain exporting countries has had a significant impact on trade flows to Portugal. Portugal imports annually about 1.7 million metric tons of corn. However, the origin of Portugal’s corn imports has evolved throughout the years, shifting away from suppliers that adopted agricultural biotechnology. Countries such as **Ukraine, Serbia, and Russia continue to gain market quota at the expenses of lower imports from the United States, Argentina, and Brazil (Graph 7).**

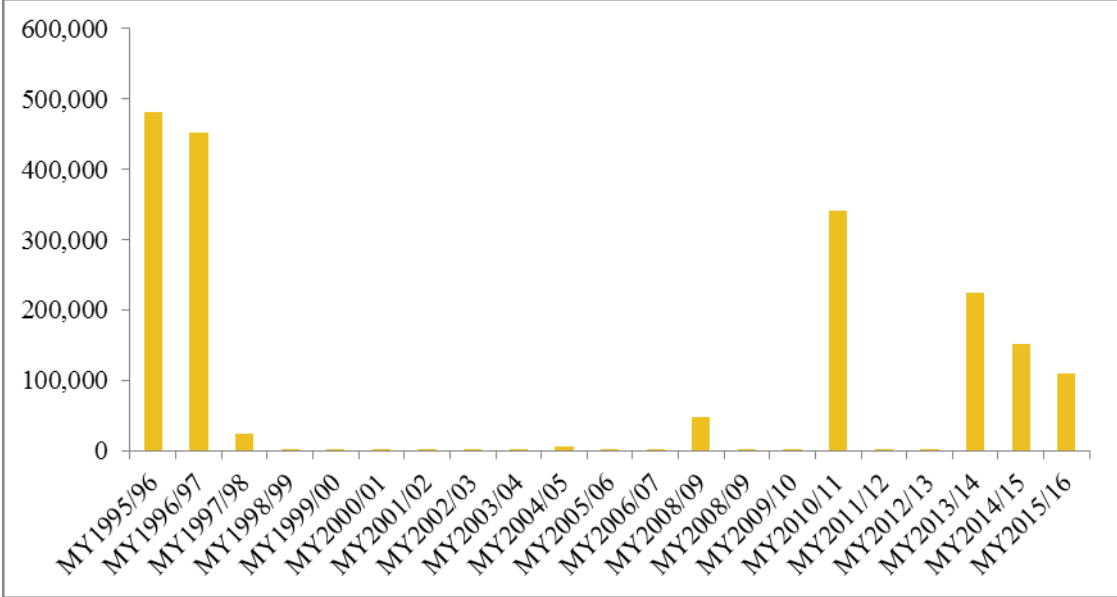
Graph 7. Portugal Corn imports by Origin (MT)



Source: GTA and FAS Madrid estimates.

Graph 8 contains U.S. corn exports to Portugal throughout the last 20 years. It shows how the beginning of GE corn plantings in the United States in 1998 caused a drastic decline in U.S. corn exports to Portugal, as a consequence of the asynchronous approval of GE events in the EU. Since then, only occasional corn trade has taken place between the United States and Portugal.

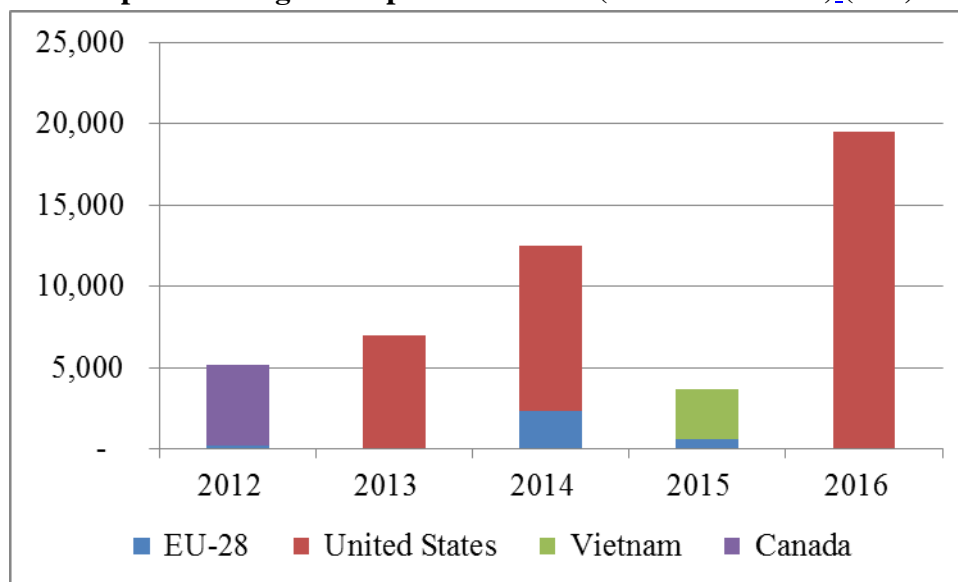
Graph 8. U.S. Corn Exports to Portugal (MT)



Source: GTA and FAS Madrid Estimates.

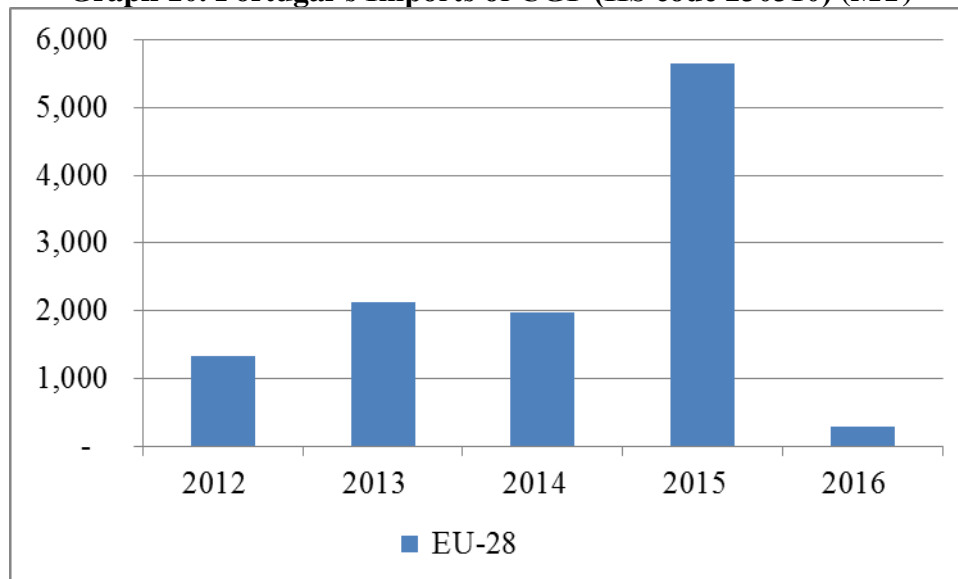
As far as corn processing by-products are concerned, **Graph 9** shows how since 2016, lower bioethanol production in the region has opened up new opportunities for DDG imports, in particular from the United States. In the case of CGF (**Graph 10**) intra-EU trade was particularly high in 2015.

Graph 9. Portugal's Imports of DDGS (HS code 230330) (MT)



Source: GTA.

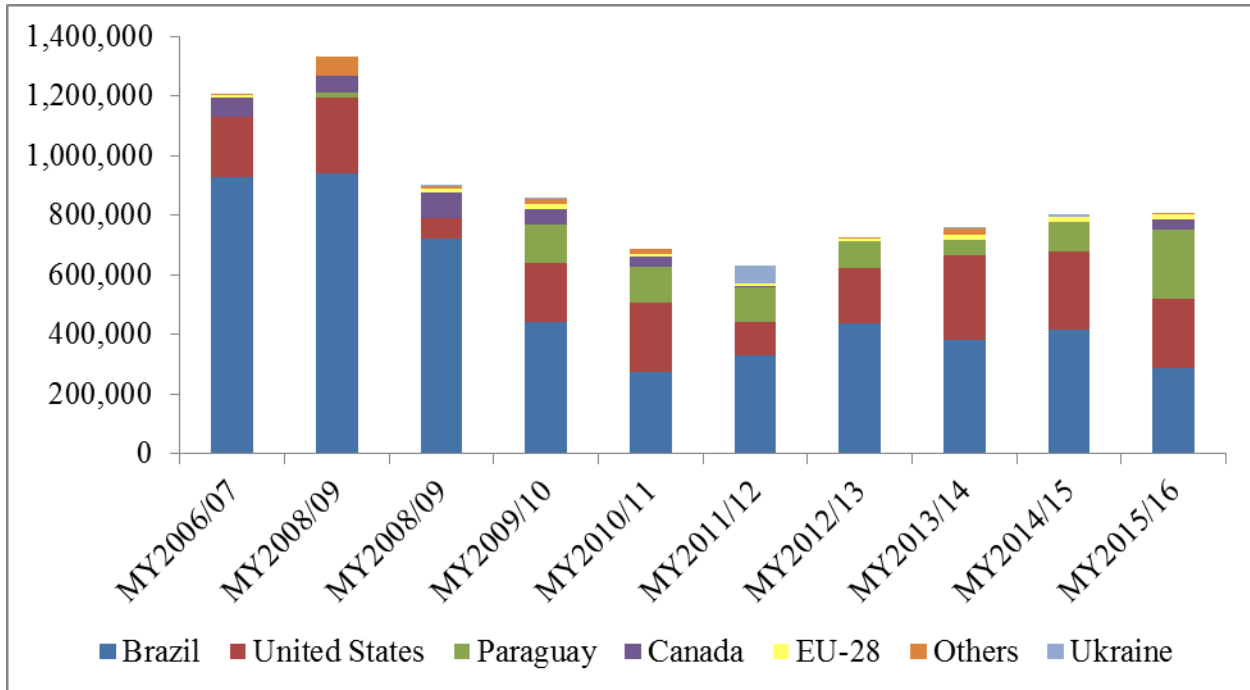
Graph 10. Portugal's Imports of CGF (HS code 230310) (MT)



Source: Global Trade Atlas (GTA)

Most of Portugal's imported soybeans and soybean meal are GE, with the exception of those devoted to special market niches. Brazil dominates Portugal soybean seed import market, accounting for nearly half of the in-country crushed soybean seeds. Soybean imports from the United States represent nearly one third percent share of Portuguese soybean imports (**Graph 11**). In **MY2015/16** Paraguay increased soybean seed exports to Portugal.

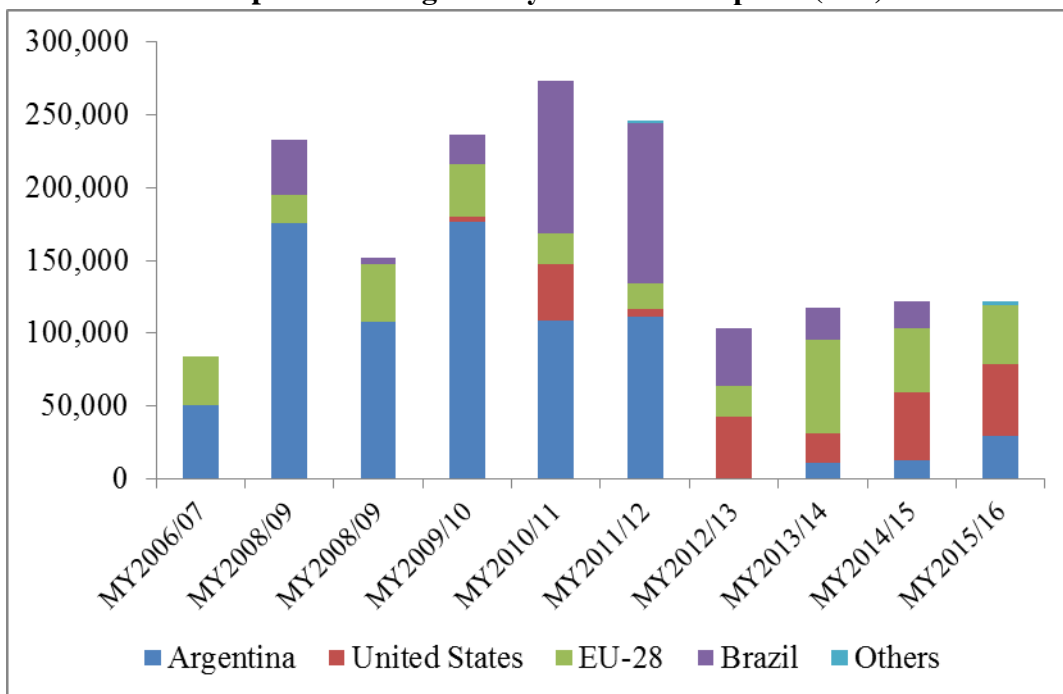
Graph 11. Portugal's Soybeans Imports (MT)



Source: GTA.

Traditionally, the large majority of Portuguese soybean meal imports (**Graph 12**) originated from Argentina. Since MY2012/13, when total soybean meal imports nearly halved, the United State share has increased at the expense of Argentina and Brazil's meal imports.

Graph 12. Portugal's Soybean Meal Imports (MT)



Source: GTA.

e) **FOOD AID**

Portugal is not a recipient of food aid. It provides food aid in accordance with the best practices of the United Nations, but does not provide GE commodities for food aid. Having said that, while in the case of emergencies, when the local markets have collapsed, in-kind food aid may be given, normally, in order to avoid pushing local down prices and discouraging domestic production in recipient countries, local purchases in recipient countries are preferred.

Portugal is founding member of IFAD (International Fund for Agricultural Development) List A since 1978, a United Nations Agency created to enable poor rural people to overcome poverty and hunger. It is also a member of the United Nations FAO (Food and Agriculture Organization) and a strong supporter of the WFP (World Food Program) working closely with the Community of Portuguese Speaking Countries (CPLP) and its member governments.

FAO works closely with Portugal and CPLP to promote the dissemination and exchange of information and knowledge with the aim of strengthening technical cooperation and familiarizing the public with the work of FAO, particularly on the issue of hunger.

The Portuguese Ministry of Foreign Affairs created the Camões Institute in 2012. It is responsible for supervision, management, and coordination of the cooperation for development of programs and projects primarily for the CPLP countries, either directly through its own resources, or in the collaboration with other national or international organizations and Non-Government Organizations (NGOs).

f) **TRADE BARRIERS**

- **For bulk commodities and consumer-oriented products**

The asynchronous approval of GE events cultivated in the United States yet not authorized for imports to the EU-28 remains the main trade barrier. Additionally, the limited allowance for adventitious presence³ for non-approved events continues to constraint traders, who carry out a no-risk policy in their purchases.

The presence of GE labeled **consumer-oriented** products is very limited in the Spanish market. The large majority of food manufacturers and processed food importers have either eliminated GE products

³ *Refers to the detection of unintentional presence of GE crops.*

from food product composition or switched to GE-free suppliers, respectively in order to avoid labeling and marketing food products with the claim “Contains GMOs.”

- **For Seed :**

Seed trade is affected by the zero tolerance of adventitious presence. The fact that the EU only allows cultivation of MON 810, serves as a trade barrier for U.S. seed exports containing or with adventitious presence of other GE events. The EU has not yet set a threshold level for adventitious GE material presence. Portugal sources the large majority of its corn from other EU Member States or from local breeders.

Additionally, to some extent seed trade is affected by the GE-free declarations. While Portugal, decided not to opt out from in-country biotechnology cultivation (See [GAIN Report FR9180](#) and Section b) Approvals under **Part B: Policy**), Portugal was one of the first countries to create legislation that recognizes GE-Free Zones.

For additional information, please see Section n) Related Issues under **Part B: Policy**.

Part B: Policy

a) REGULATORY FRAMEWORK

The EU Regulations directly apply in all EU member States, however, EU Directives have to be transposed into national laws, and the EU provides the opportunity for Member State governments to exercise some discretion without altering the basic scope of the EU directive. For EU Agricultural Biotechnology Regulatory Framework please see [EU-28 Biotechnology Annual Report](#).

Portugal transposed the European [Directive 2001/18](#) regarding “GMOs” to national regulation by [Decree-Law 72/2003 \(in Portuguese\)](#) as amended by [Decree-Law 164/2004 \(in Portuguese\)](#).

There are two Ministerial Departments that weight-in on Portugal’s biotechnology decision-making process: the Directorate General for Food and Veterinary Affairs (DGAV) ascribed to the Ministry of Agriculture Forestry and Rural Development, and the Portuguese Agency of Environment (APA) ascribed to the Ministry of Environment.

Directorate General for Food and Veterinary Affairs (DGAV)

The Directorate General for Food and Veterinary Affairs (DGAV), within the Ministry of Agriculture, Forestry and Rural Development, is responsible for the coordination and implementation of the regulation of GE crops for cultivation as well as for coexistence monitoring and reporting. This

Directorate General is also responsible for the coordination and implementation of the regulation of GE crops intended for imports and human or animal consumption and the food and feed chain control.

In addition, the DGAV oversees the process for registering and monitoring GE seed for planting. At present there are about 226 GE [corn varieties approved for commercial cultivation in Portugal](#).

Portuguese Agency of Environment (APA)

The Portuguese Agency of Environment, ascribed to the Ministry of Environment, is responsible for the authorization of confined use ([Decree Law 55/2015 \(in Portuguese\)](#)) and deliberate release to the environment of GE products for purposes different than marketing ([Decree-Law 72/2003 \(in Portuguese\)](#)). Decisions are based on risk assessment considering both environmental and human health potential risks, after the Directorate General of Health (DGS) and the Directorate General for Food and Veterinary affairs (DGAV) weigh in. Public consultation maybe deemed appropriate.

b) APPROVALS

- For imports:

Approvals of events for imports are managed at the EU level. Please see the EU-28 Biotechnology Report for a list of approved GE events. Member States have the chance to weigh in in the approval process through their participation in the EU committees, both at the technical and political level. For more information on the EU approval process, please see [EU-28 Agricultural Biotechnology Annual report](#).

- For cultivation:

Approvals of events for cultivation are managed at the EU level; however, since spring 2015, member states are entitled to “opt out” in their territories ([Directive \(EU\) 412/2015](#)).

Portugal abstained in the EU vote on renationalization of cultivation decisions. FAS/Madrid understands this as an attempt to express their partial dislike to some aspects of the proposal. [Directive \(EU\) 412/2015](#), on the possibility for the Member States to restrict or prohibit the cultivation of genetically modified organisms in their territory, has not yet been transposed in Portuguese law.

Issued by the Portuguese Republic Assembly, on April 1, 2015, Portugal published [Resolution 32/2015 \(in Portuguese\)](#) in its official gazette. In this resolution, the Portugal Republic Assembly recommends to the government that the transposal of EU provisions on cultivation decisions is subject of Portugal Republic Assembly law. [Directive \(EU\) 2015/412](#) sets April 3, 2017 as limit for transposal to National Law.

Portugal, as with four other Member States countries that grow GE corn, decided not to opt out of GE cultivation. For additional information See [GAIN Report FR9180](#).

c) STACKED EVENTS APPROVALS:

See section b) on approvals as the procedure in place is the same for single and for stacked events.

d) FIELD TESTING

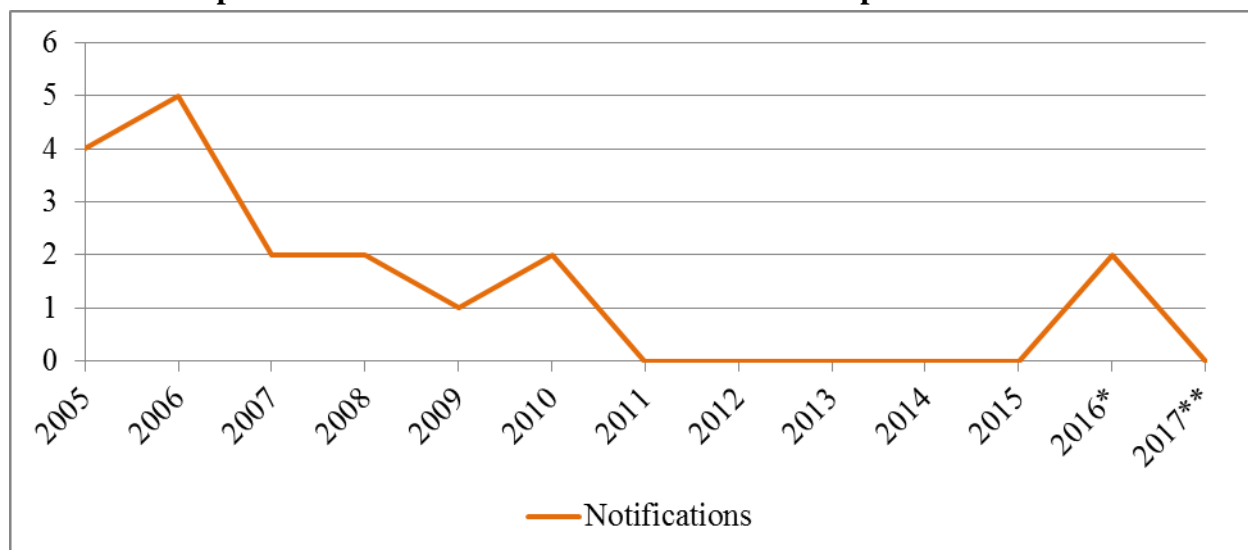
[Decree-Law 72/2003 \(in Portuguese\)](#), as amended by [Decree-Law 164/2004 \(in Portuguese\)](#), regulates the deliberate release in the environment of a GMO.

Prior notice and authorization are required to carry out field tests. Those companies that intend to carry out field trials must submit a notification to the Portuguese Agency of Environment (APA) for its assessment. Risks for the environment and for human health are considered in the assessment.

The Ministerial Departments that weigh in prior to APA's opinion include the Directorate-General of Health (DGS) and the Directorate-General for Food and Veterinary Affairs (DGAV).

No field trial notifications have been recorded since 2010. An uncertain investment environment for seed companies has caused the private sector to limit their interest in the development of GE crops adapted to Portugal specific conditions. EU seed breeding companies have concentrated their efforts in non-European markets, and most of their research in plant biotechnology is conducted outside Europe. No deliberate releases have been notified in 2017.

Graph 10. Deliberate Release Notifications to Competent Authorities



Source: Foreign Agricultural Service (FAS) Madrid based on APA and Joint Research Center Information.

* In 2016, two deliberate releases in the field of medical research have been notified to competent authorities. Additional information about deliberate releases is available in the [Portuguese Agency of Environment website](#).

**2017 data are based on data available up to October 1, 2017.

a) Confined Research

Confined research with GE organisms is regulated by [Decree Law 55/2015 \(in Portuguese\)](#), which establishes prior notice and approval by competent authorities (APA, DGS and DGAV).

e) INNOVATIVE BIOTECHNOLOGIES

In the field of Innovative Biotechnologies (IBs), Portugal is waiting for additional guidance from the European Commission. Additional information can be found at [E16013](#).

f) COEXISTENCE

By [Decree-Law 160/2005 \(in Portuguese\)](#) Portugal regulated coexistence back in 2005 following the [Commission Recommendation 2003/556/EC](#). Coexistence measures include observing an isolation distance that runs from 200 to 300 meters depending on whether in the adjacent plot conventional or organic crops are grown. Other options to minimize adventitious presence of GE pollen in other plots is the use of conventional corn border rows (24 to 28 rows), physical isolation, or the use of staggered plantings or staggered flowering or temporal isolation (less commonly used). Farmers must also keep

conventional corn zones, also known as insect refuge areas, of at least 20 percent of the total GE corn area.

Decree-Law 160/2005 allows farmers to create GE Production Zones. In GE Production Zones farmers are still mandated to fulfill all legal obligations related to farming GE varieties, namely completing training requirements and notifying the DGAV and adjacent farmers about their GE crop farming intentions. However, and except for limit zones, farmers are exempt from applying measures to minimize the adventitious presence of GE material.

The creation of GE Production Zones, which has been increasingly used to facilitate compliance with coexistence requirements, is a good example of how small farmers can benefit from biotechnology by coming to an agreement with neighboring farms. According to 2016 data, these zones represented over 40 percent of the land planted to GE corn and to over 40 percent of GE corn farmers. In particular, the use of GE production Zones (**Table 4**) has contributed to facilitate the use of agricultural biotechnology.

Table 4. GE Zones Share of GE Area by Region (%)

Region	2008	2009	2010	2011	2012	2013	2014	2015	2016
Norte	17.5	16.6	12.3	12.1	15.5	7	4	0	0
Centro	52.6	54	66.4	51.2	61.9	57	57	55	55
Lisboa	32.8	54.7	28.3	42	49.2	48	41	36	51
Alentejo	65.2	39.4	54.8	54.9	71.6	65	50	25	31
Algarve	0	0	0	0	0	0	0	0	0
Acores	0	0	0	0	11.7	0	0	0	0
Portugal	51.9	45.1	46.2	49.5	62.7	59	48	42	42

Source: DGAV reports.

On a yearly basis, the Directorate General for Food and Veterinary (DGAV) publishes information related to coexistence measures implementation. Full reports (Available in Portuguese language only) can be found in the [DGAV website](#).

g) LABELING

There is no national level biotech labeling regulation developed in Portugal. Portugal, as an EU member, follows the rules set out in [Regulation \(EC\) 1829/2003](#) on Genetically Modified Food and Feed, and [Regulation \(EC\) 1830/2003](#) on the Traceability and Labeling of Genetically Modified Organisms. There is no “non-GMO” labeling regulation developed at the national level.

Food and feed products containing amounts above 0.9 percent per ingredient must be labeled. The large majority of feed products are labeled as “contains GE products” as opposed to food products, for which food companies have opted for reformulating in order to avoid GE products.

Detailed information on the EU-harmonized labeling legislation is available in the [EU-28 Food and Agricultural Import Regulations and Standards Report](#) well as the [USEU website section on labeling](#).

h) MONITORING AND TESTING

Portugal has a decentralized system for testing and controlling unauthorized presence of GMO in the feed and food chain. The Directorate General for Food and Veterinary (DGAV) is responsible for the coordination of the food and feed chain control and Regional Directorates are responsible for its implementation.

The Portuguese regulations for sampling and testing are based on EU legislation, for more information please see the [EU-28 Agricultural Biotechnology Annual report](#). Portuguese imports are subject to random testing upon border entry, unless [the EU Rapid Alert System for Food and Feed \(RASFF\) database](#) flags a particular product and origin for additional measures. Portugal uses the RASFF to report food safety issues to consumers, the trade, and other member-states. In 2017 (up to October 1, 2017), no shipments were rejected due to presence of unauthorized genetically modified products in Portugal.

i) LOW LEVEL PRESENCE

As an EU member, Portugal conforms to EU directives and follows EU regulations on agricultural biotechnology. Since July 2011, EU legislation sets a 0.1 percent⁴ technical zero' level for shipments devoted to the **feed** market.

However, for products that will enter the **food** chain the tolerance is absolute zero. Consequently, adventitious presence continues to be a concern for traders, who carry out a no-risk policy in their purchases, regardless the final use.

The absence of a threshold limit for GE material in **seeds** results in trade disruptions. Because the EU-28 only allows cultivation of MON 810, it serves as a trade barrier for U.S. seed exports containing or with adventitious presence of other GE events. The large majority of seed companies operating in Portugal source corn seed locally or import from other from other EU MS. Seed imports from extra EU countries represent less than 1 percent of the corn seed trade.

⁴ *This level corresponds to the lowest level of GE material taken into account by the EU reference laboratory for the validation of quantitative methods. It is only applicable to “adventitious” presence in feed material of non-approved products of agricultural biotechnology for which an authorization procedure is pending in the EU or for which an authorization has expired.*

j) ADDITIONAL REQUIREMENTS

- Mandatory Training:

Farmers who want to cultivate GE crops in Portugal must participate in mandatory training sessions provided by the seed companies. The content of the training sessions is established by the DGAV and includes information about national and EU regulations for GE crops.

In 2016, 77 farmers participated in these training sessions. GE corn seed lots are marketed accompanied by leaflets containing information regarding coexistence, traceability, and labeling.

- GE Crops Field Register

Farmers who want to grow GE crops must submit a completed notification form to DGAV 20 days before planting. In 2017, there were 202 notifications down from the 242 notifications registered in 2016. The large majority of the notifications (over 40 percent) corresponded to the Centro Region, although Alentejo has the largest area. Producers must also communicate any alteration of the planting plan to the Regional Directorate for Agriculture. With the exception of 2010, when only 191 farmers notified GE corn plantings, 2017 registered the lowest number of notifications since 2007 (**Table 5**).

Farmers must communicate to neighboring farmers their intention to plant GE corn, and the plots within distances established in [Decree-Law 160/2005 \(in Portuguese\)](#).

Table 5. Number of Notifications

Number of Notifications	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Norte	25	57	69	44	36	29	19	14	9	14	9
Centro	48	98	66	51	48	55	48	51	49	94	82
Lisboa	38	33	36	31	55	54	51	44	44	53	48
Alentejo	52	61	62	65	107	120	113	129	114	81	63
Algarve	1	1	1	0	0	1	1	0	0	0	0
R. A. dos Açores	0	0	0	0	2	19	0	0	0	0	0
R. A. da Madeira	0	0	0	0	0	0	0	0	0	0	0
Portugal	164	250	234	191	248	278	232	238	216	242	202

Source: DGAV

- GE Crops Coexistence measures

Farmers must put in place measures to avoid adventitious presence in neighboring fields (See **Coexistence** Section below) and comply with traceability and labeling requirements as well as facilitate official control by competent authorities in their farms.

k) INTELLECTUAL PROPERTY RIGHTS (IPR)

The Community Plant Variety Right (CPVR), issued by the Community Plant Variety Office (CPVO) in Angers, (France), provides intellectual property rights for protection of plant varieties. However, the European Patent Convention (EPC) of October 1973 excludes patents for plant varieties. The CPVR enables breeders to be granted a single intellectual property right operative across the EU. The CPVR coexists with individual Member States' national plant protection legislation as an alternative form of protection.

Plant Varieties Protection Rights in Portugal are regulated by [Decree-Law 213/90](#) and [Portaria 940/1990](#) (in Portuguese). The registration in the Protected Plant Varieties Catalog is voluntary and managed by CENARVE (National Center for Protected Varieties Register). Registration provides seed breeders' with a 15 – 20 years protection period for annual or permanent crops respectively.

MON810 is the only GE event commercially grown in Portugal. As with most of the corn cultivated in Portugal, MON810 is also a hybrid. As a result, IPR is not an issue for Portugal's GE crops since hybrid seeds are not replanted.

l) CARTAGENA PROTOCOL RATIFICATION

The EU is a signatory to the Cartagena's Biosafety Protocol, as is Portugal. Portugal became a party to the Protocol in 2004 ([Decree 7/2004 \(in Portuguese\)](#)).

At the national level, [APA](#) the Portuguese Environmental Agency, is the competent authority of the Protocol. Additional information on the Cartagena's Biosafety Protocol can be found in its [official website](#).

m) INTERNATIONAL TREATIES AND FORA

Portugal's participation in international treaties and fora is not different from that of the EU. For more information on this regard it is recommended to read the [EU-28 Agricultural Biotechnology Annual report](#).

n) RELATED ISSUES

Portugal was one of the first countries to create legislation that recognizes the right of farmers to voluntarily associate and establish both GE Production Zones and GE-Free Zones. The initiative to create a GE-Free Zone as defined in [Portaria 904/2006 \(in Portuguese\)](#), and amended by [Portaria nº 1611/2007\(in Portuguese\)](#), initiates with the farmers or from the Municipal Administration. In the latter case, farmers are still required to express their opinion and the process will only advance if farmers give their public consent. The right for an individual farm to be excluded from the free zone is safeguarded.

Autonomous Region of Madeira

By the publication of [Regional Legislative Decree 15/2010M \(in Portuguese\) in 2010](#), the Autonomous Region of Madeira became the first Region of the EU to declare itself a zone free of the cultivation of genetically modified organisms. More detailed information available in GAIN Report [PT1103](#). Although EFSA concluded that no new scientific evidence would justify a prohibition of the cultivation of GE plants in Madeira, as the Commission's deadline expired, the Portuguese Decree was tacitly accepted.

Autonomous Region of the Azores

[Regional Legislative Decree 28/2012/A \(in Portuguese\)](#) published in June 2012 prohibits the cultivation of GE crops for commercial purposes in the Azores, as allegedly the Region's environmental quality and biodiversity wealth would be endangered by the cultivation of GE crops.

Part C: Marketing

g) PUBLIC/PRIVATE OPINIONS

The Portuguese Administration has traditionally followed a science-based approach in the biotech decision making process and has fully implemented all EU regulations in its territory, including strict coexistence rules. The Portuguese Administration has traditionally followed a science-based approach; however, since 2015, Portugal has been less consistent in following EFSA's advice in the EU approval process for GE events.

Portugal is the second largest producer of GE crops in the EU after Spain, which demonstrates the strong support by most farmers. Portugal is an importer of corn feed products and protein crops like soybeans. Given the needs of the animal production sector and the limited domestic grain availability, the majority of Portuguese feed and food chain links strongly support plant biotechnology as a means of achieving higher competitiveness. Feed producers and livestock breeders defend their right to compete in equal conditions and be able to produce using the same technology as their main competitors. There is not a strong reaction from meat retailers or consumers.

At the government level, in the July 17-18, 2017 Council of Ministers, Portugal was one of the 13 European Member States that did not sign the [European Soya Declaration](#) put forward by the German and Hungarian delegations.

h) MARKET ACCEPTANCE/ MARKETING STUDIES

In Portugal, as in other European countries, GE products are primarily used for livestock feed. The presence of GE labeled consumer oriented products in the marketplace is nonexistent, as the large majority of food manufacturers eliminated GE products from the food composition to avoid labeling as "Contains GMOs." However, feed producers and livestock breeders defend their right to compete in equal conditions and be able to produce using the same technology as their main competitors.

[Biotechnology Information Center](#) (CIB) is a non-profit organization supported by different public and private institutions. Created in 2002, CIB's main goal is to promote communication on biotechnology in Portugal as well as in other Portuguese speaking countries. CIB shares information, engages in public debates consults in biotechnology related regulation development. It also organizes seminars targeting different audiences.

There are not many recent country-specific studies on marketing or acceptance of biotechnology in Portugal.

A study entitled "[Challenges facing European agriculture and possible biotechnological solutions](#)" and published in July 2015 identifies and analyzes agricultural challenges for nine major crops (including

corn) in 13 EU countries (including Portugal). The study examines how these challenges are addressed by public and private research sectors, using either conventional breeding, marker-assisted selection, transgenesis, cisgenesis, RNAi technology or mutagenesis. This study found that for the nine major crops in Europe, 40 percent of the challenges identified were addressed neither in the scientific literature nor in recent European public research programs. The private sector was addressing only a few of these “neglected” challenges confirming the considerable gap between farmer’s needs and current breeding and biotechnology research. This study concludes that the current political situation in certain EU countries is an impediment to GE research in order to address these agricultural challenges in the future.

Chapter 2: Animal Biotechnology

Part D: Production and Trade

a) PRODUCT DEVELOPMENT

FAS Madrid is not aware of any genetic engineering or cloning of farm livestock carried out in Portugal.

b) COMMERCIAL PRODUCTION

There are neither GE animals nor cloned animals commercially used in Portugal. There is no production of GE animals or clones intended for the food market in Portugal.

c) EXPORTS

Not applicable.

d) IMPORTS

Portugal does not have a system to monitor the imports of GE animals and cloned offspring or genetics from clones.

e) TRADE BARRIERS

GE or cloned trade barriers in Portugal are the same as those established at the EU level. For more information about the European framework, please see the latest [EU-28 Biotechnology Annual Report](#).

Part E: Policy

a) REGULATORY FRAMEWORK

For GE and cloned animals, Portugal abides by the EU law. For more information about the European framework, please see the latest [EU-28 Biotechnology Annual Report](#).

b) INNOVATIVE BIOTECHNOLOGIES

Portugal has not regulated the use of innovative biotechnologies in animals.

c) LABELING AND TRACEABILITY

Portugal has implemented EU legislation on labeling and traceability. For more information on this topic, see the latest [EU-28 Biotechnology Annual Report](#).

d) INTELLECTUAL PROPERTY RIGHTS (IPR):

Portugal has implemented EU legislation. For more information on this topic, see the latest [EU-28 Biotechnology Annual Report](#).

e) INTERNATIONAL TREATIES/FORUM

Portugal's participation in international treaties and forums is no different from that of the EU. For more information on this topic, see the [EU-28 Biotechnology Annual Report](#).

f) RELATED ISSUES

Not available

Part F: Marketing

a) PUBLIC/PRIVATE OPINIONS

Not available

b) MARKET ACCEPTANCE/ STUDIES

Not available

Related Reports

Report Title	Date Released
Dutch Proposal to Legislate NBTs	10/04/2017
EC Proposes Changes in Comitology Rules	03/01/2017
Change in voting behavior may lead to GE crops not being approved	09/11/2017
Agriculture Biotechnology Annual 2016– EU-28	12/16/2016
Agriculture Biotechnology Annual 2016 – Portugal	12/05/2016
Legal Opinion on New Plant Breeding Techniques to be Published Soon	02/19/2016