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Biotechnology - GE Plants and Animals Biotechnology and Other New Production Technologies

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Report Highlights:

Portugal is the European Union's (EU's) second largest GE corn grower, after Spain, and has fully implemented EU regulations in its territory, including strict coexistence rules. Given the needs of the animal production sector, the majority of Portuguese feed and food chain links strongly support plant biotechnology as a means of achieving higher competitiveness. The Portuguese administration has successfully managed to follow a science-based approach in the agricultural biotechnology decision making process.

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 <u>EU-28 consolidated report</u>.

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Acronyms used in this report:

EC European Commission

EU European Union

FAS Foreign Agricultural Service

MS Member State(s)

MT Metric ton (1,000 kg)

Ha Hectares

GMO Genetically Modified Organism

GE Genetically Engineered

GTA Global Trade Atlas

DDG: Dried Distillers Grains

CGF: Corn Gluten Feed

N/A Not available

GTA Global Trade Atlas

GOP: Government of Portugal

DGAV: Directorate General for Food and Veterinary Affairs

DGS: Directorate General for Health Issues APA: Portuguese Agency of Environment

ANPROMIS: Portuguese Association of Corn and Sorghum Producers

ANSEME: National Association of Seed Breeders

Section I: Executive Summary

Portugal is the EU-28 second largest grower of Bt corn, after Spain. Portugal has managed to comply with EU strict rules and still allow a cultivation of MON 810 in is territory. GE and total corn plantings increased until 2013, when a seed shortage along with low pest incidence provoked a decline in plantings. In 2014 and 2015 MON810 area further constrained further as a consequence of the overall lower corn plantings. For field trials, prior notice and authorization are required. There are no notifications recorded since 2010.

U.S. agricultural exports to Portugal consist mainly on bulk commodities, which accounted for about 80 percent of the U.S. export value in the period 2010-2014. Soybeans, soybean meal and pulses are the most important traded products. Portugal imports on average about 3 million MT of grains and about 1.5 million MT of soybeans and soybean meal, as its domestic feed grain production is not large enough to meet livestock industry demand.

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. Biotechnology adoption in other grain exporting countries is having similar effects in the feedstuffs trade flows. The origin of the corn imports has changed throughout the years, with Ukraine gaining market share at the expenses of biotechnology adopters such as United States, Brazil and Argentina.

Given the country's structural shortfall of raw materials, 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.

Portugal has successfully managed to follow a science-based approach in the agricultural biotechnology decision making process.

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 area planted to corn has declined in 2015 compared to 2014 by nearly 10 percent. Lower revenue compared to other crops together with crop diversification established by greening measures¹, are forcing total corn area down (**Table 1**).

Table 1. Portugal's Corn Area*

Marketin	MY2010/1	MY2011/1	MY2012/1	MY2013/1	MY2014/1	MY2015/16
Total	132	137	143	147	137	126

Source: ANPROMIS and FAS Madrid estimates.

Area planted to Bt corn in Portugal has increased steadily in recent years (**Table 2** and **Graph 1**). In **2012** a new record in terms of area planted to Bt corn was achieved, when total area planted to Bt corn in Portugal in reached 9,278 Ha (See <u>GAIN Report SP1234</u>). In **2013**, despite the higher total corn plantings, Bt corn area registered a decline, most likely as a consequence of the lower incidence of corn borer along with seed shortage are as seen as the main drivers for the Bt corn planting area decline. In **2014**, a new decline of area planted to Bt corn took place in line with the total area planted to corn.

^{*}Continental area of grain corn and silage corn is considered.

¹A 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.

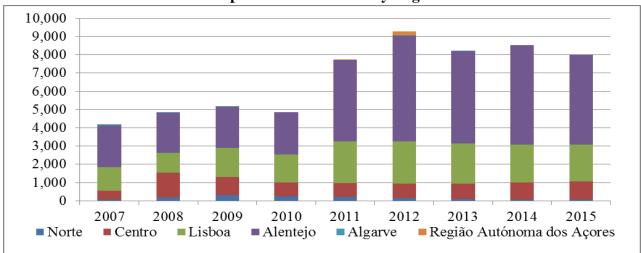
Official statistics indicate that MON810 area for **2015** has constrained further as a consequence of the overall lower corn plantings (**Graph 2**). Nevertheless, in 2015 the share of Bt corn grew compared to 2014 results (**Graph 3**). Official statistical sources indicate that the corn borer had a significant incidence in this season's corn crop. Corn yields may also be affected by the poor pollination caused by the abnormally high temperatures prevailing throughout July.

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

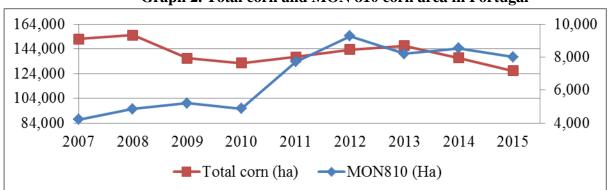
Region	2007	2008	2009	2010	2011	2012	2013	2014	2015
Norte	62	190	298	248	209	165	85	78	60
Centro	490	1,352	1,013	765	758	774	853	933	1,013
Lisboa	1,291	1,098	1,603	1,511	2,294	2,322	2,215	2,074	2,002
Alentejo	2,306	2,175	2,246	2,344	4,460	5,796	5,041	5,457	4,942
Algarve	51	42	42	-	-	13	8	0	0
Açores	-	-	-	-	3	208	0	0	0
Total	4,200	4,856	5,202	4,869	7,724	9,278	8,202	8,542	8,017

Source: DGAV.

Graph 1. GE Corn Area by Region



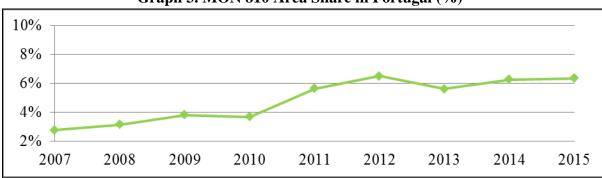
Source: FAS Madrid based on DGAV data.



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.

The expansion of GE corn plantings in Portugal is limited by a number of factors. First of all, 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. Approvals of new traits for cultivation could raise the interest for GE crops in other areas.

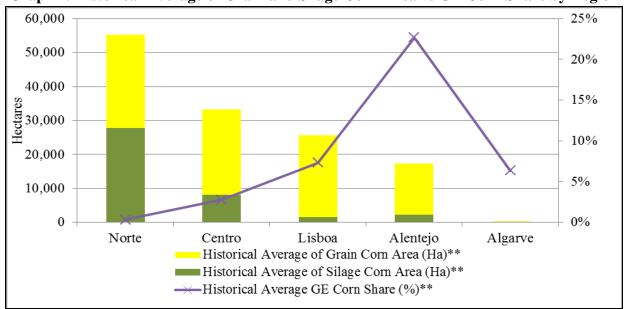
Also, the final use of the corn produced contributes to explain why some farmers do not opt for GE corn: The fact that the large majority of food manufacturers have eliminated GE products from food product composition to avoid labeling as "Contains GMOs" makes those corn farmers supplying the food industry to opt for non-GE varieties. In the case of forage corn growers, as the impact of cornborer in final yields is smaller, the use of GE corn is rather limited (See **Table 3** and **Graph 4**).

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	182	27,482	27,842	0.3%
Centro	5.4	921	25,248	8,029	2.8%
Lisboa	11.5	1,874	24,182	1,491	7.3%
Alentejo	51.0	3,931	15,022	2,303	22.7%
Algarve	7.1	15	215	20	6.3%
Continental Portugal	12.7	6,923	92,149	39,686	5.3%

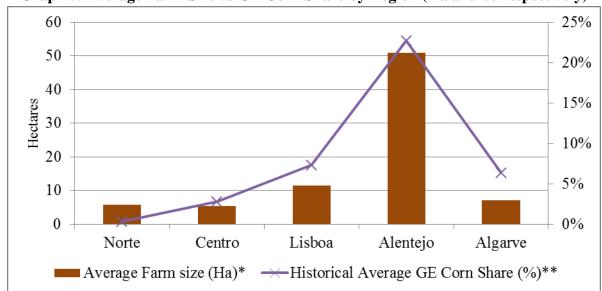
Source: Ine.pt, DGAV and ANPROMIS data *based on Survey 2009 data.**2008-2014 average

Graph 4. Historical Average of Grain and Silage Corn Area vs GE Corn Share by Region



Source: FAS Madrid based on Table 3 data.

Coexistence also plays a role in corn farmers planting decisions. Portuguese corn growers have managed to comply with strict coexistence rules and still cultivate of MON 810 in their land. However, **Graph 5** shows how the size of the farm contributes to facilitate the use of this technology, as the share of GE corn is higher in those regions where the farm size is larger. (For additional information, see Coexistence section)



Graph 5. Average Farm Size vs GE Corn Share by Region (Ha and % respectively)

Source: FAS Madrid based on Table 3 data.

c) GE crops exports

Portugal is a net importer of grains and oilseeds as the domestic production is not sufficient to meet the livestock sector demand. GE product exports are negligible as production is used up by the feed industry.

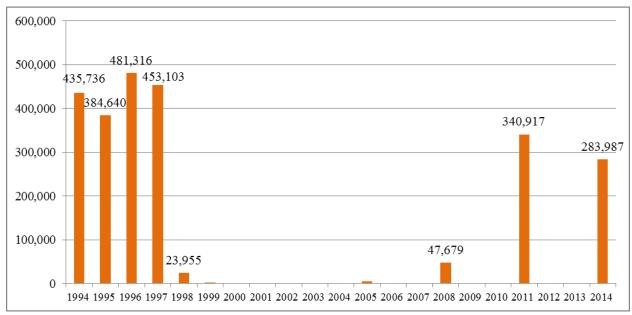
d) GE crops imports

Portugal imports GE soybean seeds originated in Brazil and the United States and soybean meal originated in Argentina to be processed by the Portuguese-based crushing and feed industries.

U.S. agricultural exports to Portugal consist mainly on bulk commodities, which accounted for nearly 80 percent of the U.S. exports value in the period 2010-2014, being soybeans, soybean meal and pulses the most important traded products.

Graph 6 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.

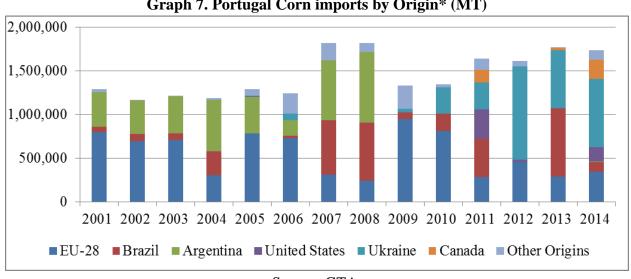
Graph 6. U.S. Corn Exports to Portugal (MT)*



Source: GTA

*Corn trade data are collected in Marketing Years basis. Corn MY runs October/September, e.g.: 2014 label should read MY2013/14.

Portugal total corn annual imports during the last 15 years were on average 1.4 million MT (**Graph 7**). The origin of the corn imports has evolved throughout the years. Ukraine has become an important corn supplier for Portugal gaining market share at the expenses of other origins such as the United States (Graph 6), Brazil and Argentina (Graph 7).



Graph 7. Portugal Corn imports by Origin* (MT)

Source: GTA.

*Corn trade data are collected in Marketing Years basis. Corn MY runs October/September, 2014 label should read MY2013/14. Most of Portugal's imported soybeans and soybean meal are GE, with the exception of those devoted to special market niches. U.S. origin soybean imports represent nearly a 30 percent share of Portuguese soybean imports (**Graph 9**), the large majority are originated in Argentina.

Graph 8. Portugal's Soybeans Imports* (MT)

1,500,000

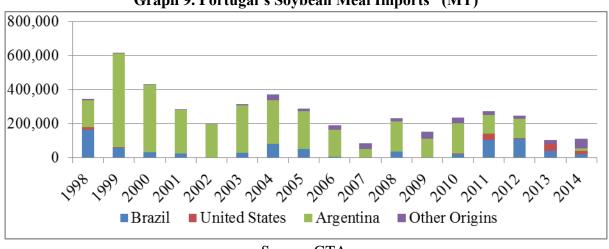
1,000,000

500,000

Paraguay Canada Argentina Other Origins

Source: GTA and FAS Madrid estimates

^{*}Soybeans trade data are collected in Marketing Years basis. Soybeans MY runs October/September, 2014 label should read MY2013/14.



Graph 9. Portugal's Soybean Meal Imports* (MT)

Source: GTA.

e) Food Aid Recipient Country

Not applicable.

^{*}Soybeans trade data are collected in Marketing Years basis. Soybeans MY runs October/September, 2014 label should read MY2013/14.

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 they provide 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 <u>EU-28 report</u>.

Portugal transposed the European Directive 2001/18 regarding "GMOs" to national regulation by Decree-Law 72/2003 as amended by Decree-Law 164/2004.

There are two Ministerial² Departments that weight-in on Portugal's biotechnology decision making process, which are the Directorate General for Food and Veterinary Affairs (DGAV) ascribed to the Ministry of Agriculture and Fisheries and the Portuguese Agency of Environment (APA), ascribed to the Ministry of Environment, Land Planning and Energy.

Directorate General for Food and Veterinary Affairs (DGAV)

The Directorate General for Food and Veterinary Affairs (DGAV), within the Ministry of Agriculture and Fisheries, 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 to that, the DGAV oversees the process for registering and monitoring GE seed for planting. Information on the corn varieties registered for planting in Portugal is available in the <u>link</u>. At present there are about 225 GE corn varieties approved for commercial cultivation.

Portuguese Agency of Environment (APA)

The Portuguese Agency of Environment, ascribed to the Ministry of Environment, Land Planning and Energy, is responsible for the authorization of confined use (<u>Decree Law 55/2015</u>) and deliberate release to the environment of GE products for purposes different than marketing (<u>Decree-Law 72/2003</u>). 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.

² No new government was formed yet (after October 4, 2015 elections) when this report was prepared.

- b) Approvals
- For imports:

Approvals of events for imports are dealt 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 <u>EU-28 Biotechnology report</u>.

• For cultivation:

In the Spring of 2015, the EU Council and Parliament approved new legislation to allow Member States to "opt out" of cultivating EU approved GE crops for non-scientific reasons starting in the spring of 2015 (Directive (EU) 412/2015).

Portugal abstained in the EU vote on renationalization of cultivation decisions in what we understand as an attempt to express their partial dislike to some aspects of the proposal. <u>Directive (EU) 412/2015</u> on the possibility for the Member States to restrict or prohibit the cultivation of genetically modified organisms in their territory has not been transposed yet.

Portugal's official gazette published on April 1, 2015 <u>Resolution 32/2015</u> issued by the Portuguese Republic Assembly. In this resolution, the Republic Assembly recommends to the GOP that the transposal of EU provisions on cultivation decisions is subject of Portugal Republic Assembly law.

Portugal, as the other four Member States countries that grow GE corn, has decided not to opt out. For additional information See <u>GAIN Report FR9180</u>.

c) Field testing

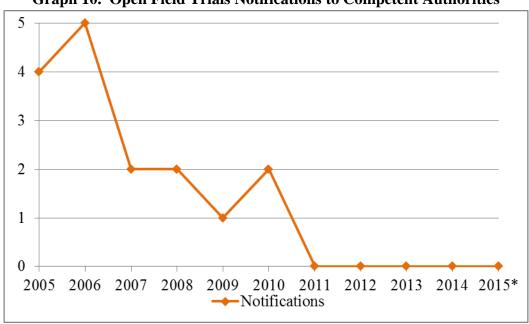
<u>Decree-Law 72/2003</u> as amended by <u>Decree-Law 164/2004</u> regulates the deliberate release in the environment of a GMO.

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).

There are no notifications recorded since 2010, as the uncertain investment environment for seed companies has provoked private sector limited interest in developing 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 done outside Europe.

Information about deliberate releases is available in the Portuguese Agency of Environment website.



Graph 10. Open Field Trials Notifications to Competent Authorities

Source: Foreign Agricultural Service (FAS) Madrid based on Joint Research Center Information. *2015 data are based on data available up to October 1st 2015.

• Confined Research

Confined research with GE organisms is regulated by <u>Decree Law 55/2015</u> which establishes prior notice and approval by competent authorities, which include APA, DGS and DGAV.

d) Stacked Events Approvals:

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

- e) Additional Requirements:
- Mandatory Training:

Those 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 the national and EU regulations in regards to GE crops.

During these training sessions the special features of GE corn are explained. In 2014, 37 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 complete mandatory training and submit a completed notification form to DGAV 20 days before planting. In 2014 there were 238 notifications up from the 232 notifications registered in 2013. The large majority of the notifications (54 percent) corresponded to the Alentejo Region. Any alteration of the planting plan must also be communicated to the Regional Directorate for Agriculture.

Farmers must communicate to neighboring farmers with plots within distances established in <u>Decree-Law 160/2005</u> their intention to plant GE corn.

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.

Until 2015 the Portuguese Ministry for Agriculture collected information on plot location but this information was only released aggregated. In 2015, for the first time information on location of GE crops plots was publically released.

f) Coexistence

By <u>Decree-Law 160/2005</u> Portugal regulated coexistence back in 2005 following the <u>Commission</u> 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 temporally isolation (less commonly used). Farmers must also keep conventional corn zones, also known as insect refugee areas of at least 20% 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 are 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 2014 data, these zones represented nearly 50 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 by Region (%)

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

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. As a member of the EU, Portugal 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. Food and feed products containing amounts above 0.9 percent 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.

h) Trade Barriers

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 <u>Portaria 904/2006</u> as amended by <u>Portaria nº 1611/2007</u> can stem from 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 <u>Regional Legislative Decree 15/2010M</u>, 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 <u>PT1103</u>. 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

<u>Regional Legislative Decree 28/2012/A</u> 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.

i) Intellectual Property Rights (IPR)

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.

j) Cartagena Protocol Ratification

The EU is a signatory to the Cartagena's Biosafety Protocol, and so is Portugal as a Member State of the European Union. Portugal became a party to the Protocol in 2004 (Decreto 7/2004).

At the national level, the Protocol is followed by the <u>Portuguese Environmental Agency</u>. Additional information on the Cartagena's Biosafety Protocol can be found in its <u>official website</u>.

k) 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 Consolidated EU-28 Biotechnology Report.

1) Related Issues: N/A

m) 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 <u>EU-28 Report</u>. Portuguese imports are subject to random testing upon border entry, unless the <u>EU Rapid Alert System</u> flags a particular product and origin for additional measures. Portugal uses the <u>Rapid Alert System for Food and Feed (RASFF) database</u> to report food safety issues to consumers, the trade, and other member-states. In 2015 (up to October 1st, 2015) no shipments were rejected due to presence of unauthorized genetically modified products in Portugal.

n) Low Level Presence

EU legislation sets at 0.1 percent the 'technical zero' level for shipments devoted to the **feed** market. A threshold level for **food** has not been established yet. In the case of **seeds**, since there is no limit for GE material presence, which results in trade disruptions.

Seed companies operating in Portugal manage to source its GE corn seeds mainly from the United States but also from Chile, South Africa, and Spain to some extent.

Part C: Marketing

a) Market Acceptance

In Portugal, as in other European countries, GE products are mainly used for feed purposes. The presence of GE labeled consumer oriented products is inexistent, as the large majority of food manufacturers eliminated GE products from the 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.

b) 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. 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. The majority of food and feed 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.

c) Marketing Studies:

<u>Biotechnology Information Center</u> (CIB) is a non-profit organization supported by different public and private institutions. CIB was created in 2002 and its 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 this 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% of the challenges identified were addressed neither in the scientific literature nor in recent European public research programs. 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.

Part D: Capacity Building and Outreach

a) Activities

FAS Madrid has not conducted any capacity building or outreach activity using USDA funds. FAS Madrid continues maintaining and sharing information available on biotech related issues with key stakeholders, serving as a source of reliable information. FAS Madrid engages with host country officials during the EU decision making process or EU directive transposal into national law to inform on key technical issues, U.S. position and potential trade implications trying to contribute to the elaboration of rational policies that do not undermine Portugal and United States common interests.

b) Strategies and Needs

Chapter 2: Animal Biotechnology

Part E: 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. Not applicable.

Part F: Policy

a) Regulation:

Not available.

b) Labeling and Traceability

Portugal has implemented EU legislation on labeling and traceability. For more information on this topic, see the Consolidated EU-28 Biotechnology Report.

c) Trade Barriers:

At the moment there are no known trade barriers related to GE or cloned animals.
d) Intellectual Property Rights (IPR):
Portugal has implemented EU legislation. For more information on this topic, see the <u>Consolidated EU-28 Biotechnology Report</u> .
e) International Treaties/Fora:
Portugal's participation in international treaties and fora is no different from that of the EU. For more information on this topic, see the <u>Consolidated EU-28 Biotechnology Report</u> .
Part G: Marketing
a) Market Acceptance:
Not applicable
b) Public/Private Opinions:
Not applicable
c) Market Studies:
Not applicable
Part H: Capacity Building and Outreach
a) Activities:
Not applicable
b) Strategies and Needs:
Not applicable
Related Reports

Report Title	Date Released
19 European countries restrict the cultivation of GE crops	10/22/2015
Agriculture Biotechnology Annual 2015– EU-28	07/27/2015
Agriculture Biotechnology Annual 2015 – Spain	07/16/2015
Agriculture Biotechnology Annual 2014– EU-28	01/09/2015
Agriculture Biotechnology Annual 2014 – Spain	06/20/2014
Spain Continues Expansion of GE Corn Plantings	10/22/2013
Agriculture Biotechnology Annual 2013– EU-27	09/10/2013
Agriculture Biotechnology Annual 2013 – Spain	06/13/2012
MON810 Corn Area Hits New Record in the Iberian Peninsula	10/30/2012
Agriculture Biotechnology Annual 2012 – Portugal	08/08/2012
MON810 Corn Area Reaches Record Level on the Iberian Peninsula	09/08/2011