



**BRYANT CHRISTIE INC.**  
GLOBAL SOLUTIONS

Prepared for the European Crop Protection Association

Estimation of Potentially Affected Agricultural Imports  
Due to Hazard-Based Criteria in the EU Regulation of Plant Protection Products

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Part I, Analysis by Region and Product Group

October 2017

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## EXECUTIVE SUMMARY

*As the European Union applies the hazard-based cut-off criteria for active substances used in crop protection products, the possible loss of pesticide Maximum Residue Limits (MRLs) has the potential to adversely affect agricultural imports valued at almost €70 billion in 2016.*

This report seeks to broadly identify the universe of worldwide agricultural exports to the European Union (EU) that could be affected by EU hazard-based cut-offs for crop protection active substances.

In 2009, the European Union revised its regulation of crop protection products, adopting a “hazard-based” approach to the approval of active substances under Regulation 1107/2009.<sup>1</sup> This Regulation establishes hazard-based “cut-offs” for certain categories of substances, including carcinogens,

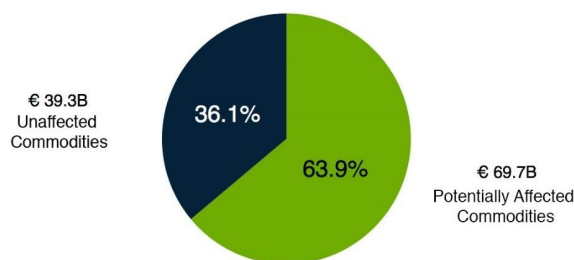
mutagens, or reproductive toxicants (“CMR”), as well as substances that are persistent in the environment. In addition, active substances deemed to have endocrine disrupting properties are subject to a hazard-based cut-off, although EU criteria for identifying substances as endocrine disruptors have not yet been adopted. Under Regulation 1107/2009, active substances meeting the criteria for any of these categories will be cut off from the European market based solely on the health or environment hazard they pose, without a risk assessment that considers levels of exposure.

Regulation 1107/2009 provides that active substances used in crop protection products be assessed for potential hazard each time the substance is subject to an approval or renewal of approval at the EU level. If deemed to belong to one of the cut-off categories, the EU Maximum Residue Levels (MRLs) can be revoked and the substance can be withdrawn from the market. The application of the criteria under regular EU reviews creates the potential for numerous plant protection products to be withdrawn from usage in EU member states and tolerances for residues on imported goods to fall to the default level of 0.01 ppm. Revocation of MRLs would patently have an impact upon worldwide exporters of

**There are 58 active substances that may be subject to hazard-based evaluation, almost all within the next four years (see Appendix A).**

Figure ES-1

### Estimated Portion of EU Agricultural Imports That Could be Affected (2016 Value)



agricultural products to the European Union, and such trade flow impacts could be substantial.

The analysis suggests that agricultural imports with a total value of €70 billion in 2016 might be adversely affected by a loss of MRLs resulting from hazard-based non-approval of 58 active substances. This represents over 60 percent of the

<sup>1</sup> Safeners and synergists in crop protections products are also subject to hazard-based analysis.

## estimated total value of all agricultural imports to the EU in 2016. <sup>2</sup>

Furthermore, although they are outside the scope of this study, it is likely that some processed agricultural products will also be affected.

The potentially affected commodities considered here fall within nine 2-digit Chapters of the Harmonized System (HS) and 82 four-digit HS classifications. However, the potential importance of this issue varies across these product groups, as seen in Figure ES-3.

Figure ES-2

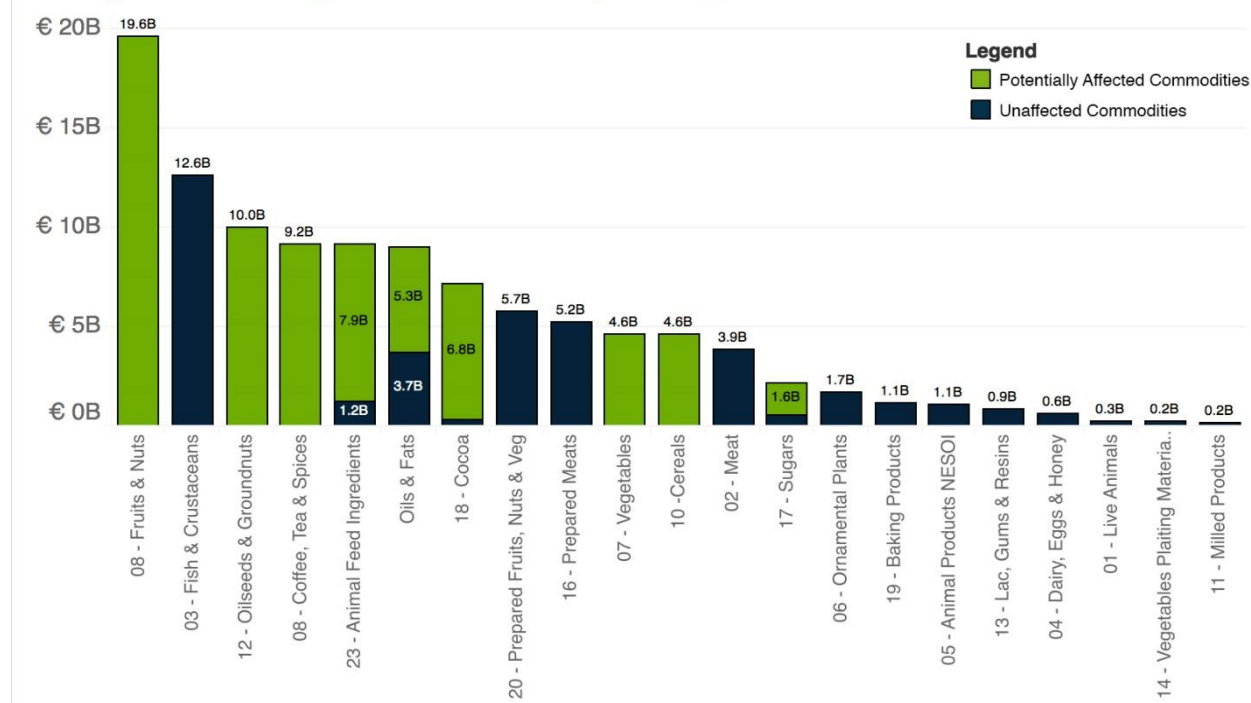
European Union 2016 Covered Commodity Imports, Value in Euros



Fruits and nuts comprise over one quarter of the value of potentially affected commodities. Oilseeds and groundnuts account for over 14 percent of the total value and animal feed ingredients, primarily consisting of soybean products, account for an additional 11 percent. Other commodity groups such as cocoa and coffee, tea, and spices are significant both in their possible exposure to the risk of MRL revocation and in their role as leading export goods for less wealthy export countries.

Figure ES-3

## All Agricultural Exports to the E.U. by Value, 2016

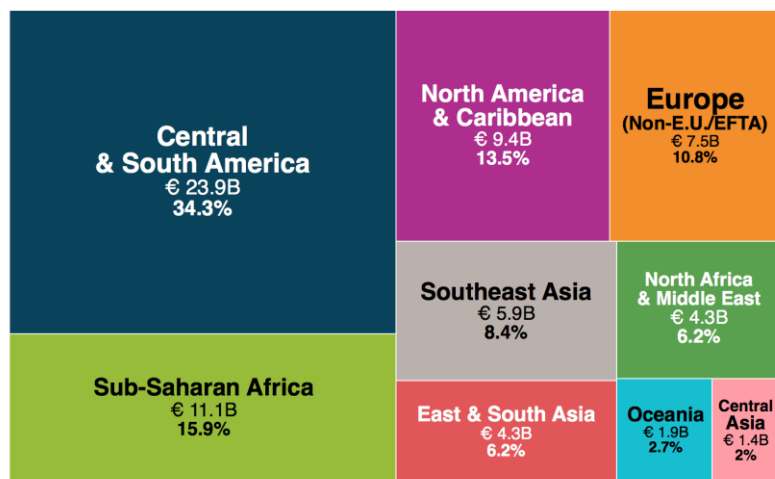


<sup>2</sup> All trade data sourced from the Eurostat Comext database, October 2017.

The potential impact also varies across trading partners (see Table ES-1, next page). Among the nine world regions examined in this report, the Central and South American region has the greatest exposure to potential trade impacts from hazard-based cut-off criteria under EC Regulation 1107/2009. This region shipped €23.9 billion of the potentially impacted EU imports in 2016 – over one third of the global total value of potentially affected commodities; and almost three quarters of all agricultural products exported to the EU from the region. Brazil accounts for one third of regional export value of potentially affected goods – and is the country with the single largest value of potentially affected commodities, at €8 billion. Fruits and nuts and animal feed ingredients are the two largest relevant product groups (€7 billion and €6 billion, respectively). Also noteworthy are several commodities for which this region is a primary supplier to the European market, adding significance to potential trade disruptions: Brazil supplied most of the EU’s sugar, and the region supplied over half of the coffee, 75 percent of bananas, and 58 percent of the tropical fruits imported into the EU.

Figure ES-4

European Union 2016 Covered Commodity Imports by Region, Value in Euros



Sub-Saharan Africa, too, has significant exports that are at risk of disruption. The total value of potentially impacted commodities from this region is less than half that of Central and South America; however Sub-Saharan Africa has a similarly high proportion of its total agricultural exports that could be impacted (75 percent). Cocoa is the largest value commodity that could be affected, at €5.8 billion in 2016, and also represents almost 85 percent of the EU’s cocoa imports.

Table ES-1

	Value of All Ag Commodities	Value of Potentially Impacted Commodities	Percent Potentially Impacted
Central and South America	€ 32,616,978,322	€ 23,889,812,620	73.2%
Central Asia	€ 2,162,176,507	€ 1,386,470,839	64.1%
East and South Asia	€ 10,458,832,406	€ 4,349,063,821	41.6%
Europe (Non-E.U./EFTA)	€ 11,197,103,019	€ 7,541,385,305	67.4%
North Africa and Middle East	€ 6,608,484,947	€ 4,300,162,556	65.1%
North America and the Caribbean	€ 14,439,932,137	€ 9,426,205,514	65.3%
Oceania	€ 3,859,804,400	€ 1,914,434,403	49.6%
Southeast Asia	€ 12,894,880,571	€ 5,866,583,594	45.5%
Sub-Saharan Africa	€ 14,820,617,986	€ 11,056,824,841	74.6%
<b>World Total</b>	<b>€ 109,058,810,295</b>	<b>€ 69,730,943,493</b>	<b>63.9%</b>

North America and the Caribbean accounted for 13.5 percent of potentially affected imports into the EU in 2016, and 65 percent of the region's total agricultural exports to the EU could be impacted by hazard-based cut-offs. Two commodity groups – fruits and nuts, and oilseeds and groundnuts – represent the bulk of the region's €9.4 billion export value, at €3.4 billion each. The EU also imported over €1 billion of cereal grains, including 60 percent of total wheat imports.

Southeast Asia supplied the EU with €5.9 billion of commodities in 2016 that are potentially affected by hazard-based cut-off criteria under EC Regulation 1107/2009. Vegetable oils – primarily palm, but also coconut – comprise one third of this total value, and also represent one third of all EU imports of vegetable oils. Coffee exports accounted for fully 25 percent of total regional exports of potentially affected commodities.

European countries outside the EU and EFTA exported €7.5 billion of potentially affected commodities to the EU in 2016. This included €2.5 billion of fruits and nuts, almost one third of which was the value of tree nuts from Turkey. The region also supplied almost half of the EU's total imports of stone fruit (valued at €178 million); and one third of all cereal grain imports (€1.7 billion). Exports of crude sunflower seed oil from Ukraine totaled €989, accounting for 98 percent of EU imports of the commodity and 82 percent of the region's total vegetable oil exports.

East and South Asia supplied the EU with €4.3 billion of potentially affected commodities in 2016, approximately 8.4 percent of the total value. Coffee, tea, and spices were the largest commodity group, with a total export value of €1.2 billion, divided almost evenly among the three named commodities.

North Africa and the Middle East exports of potentially affected agricultural commodities in 2016 totaled €4.3 billion. Seventy five percent comprised exports of fruit and nuts (€1.7 billion) and vegetables (€1.5 billion). Morocco was the primary supplier of both categories, with total potentially affected exports of €1.7 billion.

Oceania's exports of potentially affected commodities totaled only €1.9 billion in 2016. The primary commodity group, oilseeds, was comprised predominantly of rapeseed exports from Australia. Similarly, the second largest commodity group, fruits and nuts, includes primarily strawberries, apples, and pears from New Zealand and nuts from Australia.

The Central Asian region has the smallest value of potentially impacted commodities at just €1.4 billion. Russia alone provides 75 percent of the region's exports to the EU within the relevant commodity groups. Half of all relevant exports are comprised of cereals and animal feed ingredients.

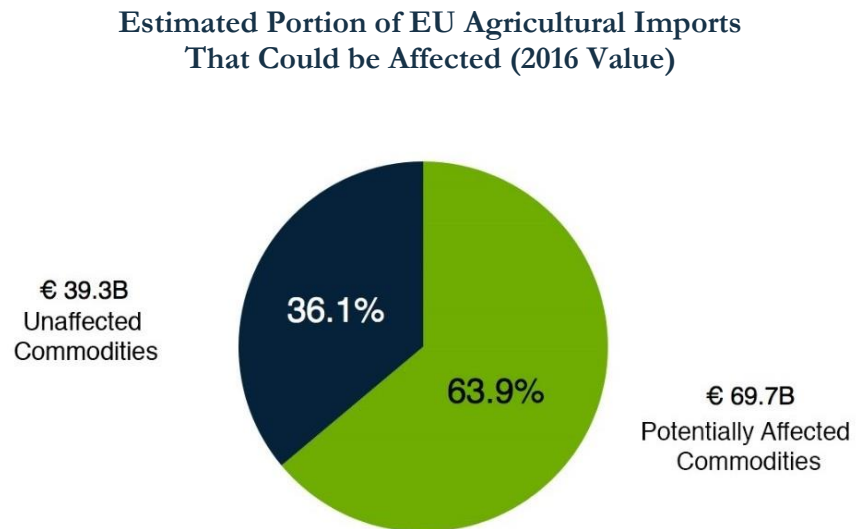
Part 1 of the attached report presents the value of potentially affected trade flows by exporting region and product group. The summary of global results includes a list (page 12) of all trading partners and the total value of potentially affected commodities from each. Part 2 of the report presents the 2016 values of potentially affected exports for the 50 top exporting countries, and identifies for each the top three product groups that are at risk.

Note that this analysis provides an estimation of trade flows that could potentially be affected, not a prediction of the likely trade effects. Study limitations, including under- and over-estimation, are discussed in the methodology section. This study was funded by CropLife International and the European Crop Protection Association (ECPA) and relevant active substances were compiled by ECPA from European Commission documents. The analysis and all other data collection is the independent work of Bryant Christie Inc.

## GLOBAL RESULTS

In 2016, the EU imported an estimated €109 billion in agricultural goods from around the world. Of these, commodities worth €69.7 billion could be affected by application of the hazard-based cut-off criteria.<sup>3</sup>

The Central and South America region is by far the leading exporter to the EU by value of the potentially affected commodities. In 2016, the EU imported 34.3 percent of the relevant commodities from Central & South America, with almost one third exported by Brazil. The region with the second largest value of potentially affected commodities was Sub-Saharan Africa, at €11.1 billion and 15.9 percent of relevant EU imports.



The predominant product groups for which EU imports could be impacted are fruits, nuts, oilseeds, coffee, and spices. Fruits and nuts are the largest category by value within the relevant commodities. The EU imported €19.6 billion worth of fruits and nuts in 2016, accounting for 28.2 percent of the total value of potentially impacted commodities. The majority of the EU's fruit and nut imports (53 percent) are sourced from the Americas. In 2016, the EU imported €2.4 billion in tree nuts from the United States and €7.1 billion in fruits and nuts from Central and South America.

In 2016, the EU imported €10 billion worth of oilseeds and groundnuts, making this the second largest potentially impacted product group. North America & the Caribbean and Central & South America are the EU's two largest foreign suppliers of oilseeds and groundnuts. The regions provide the EU with a combined €6.9 billion of these commodities. Brazil and the United States supplied €2 billion each in the form of soybeans. Shipments of soybeans and soy products from Brazil and Argentina also contribute most of the EU's imports of animal feed ingredients from the world, a distinct product category that comprises 11.4 percent of total impacted imports. Central and South America produce 79.4 percent (€23.9 billion) of EU imports of animal feed ingredients.

The EU imported significant amounts of coffee, tea, and spices in 2016. Shipments in this category totaled €9.2 billion in 2016. Coffee imports comprising €7 billion of this total value, supplied primarily by Central and South America. The EU imported most of the spices category from Asia. Southeast Asia and the East and South Asia regions provided the EU with a combined €827 million of spices, such as pepper and ginger. The most important export of potentially affected commodities for Sub-

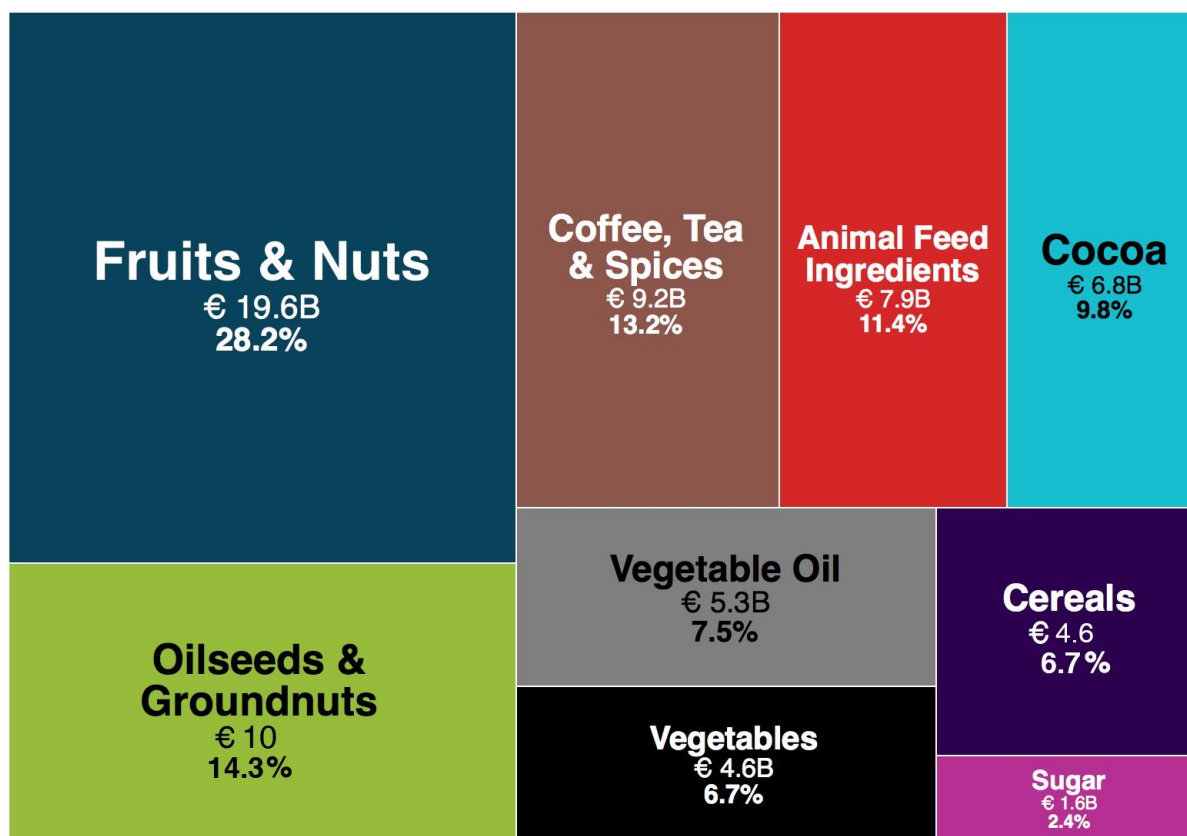
<sup>3</sup> All trade data sourced from the Eurostat Comext database, October 2017.



Saharan Africa is cocoa. As of 2016, 84.5 percent (€5.8 billion) of the EU's imports of cocoa were imported from the region. Cote d'Ivoire is the region's largest exporter of cocoa to the EU, shipping 42 percent of the global total in 2016.

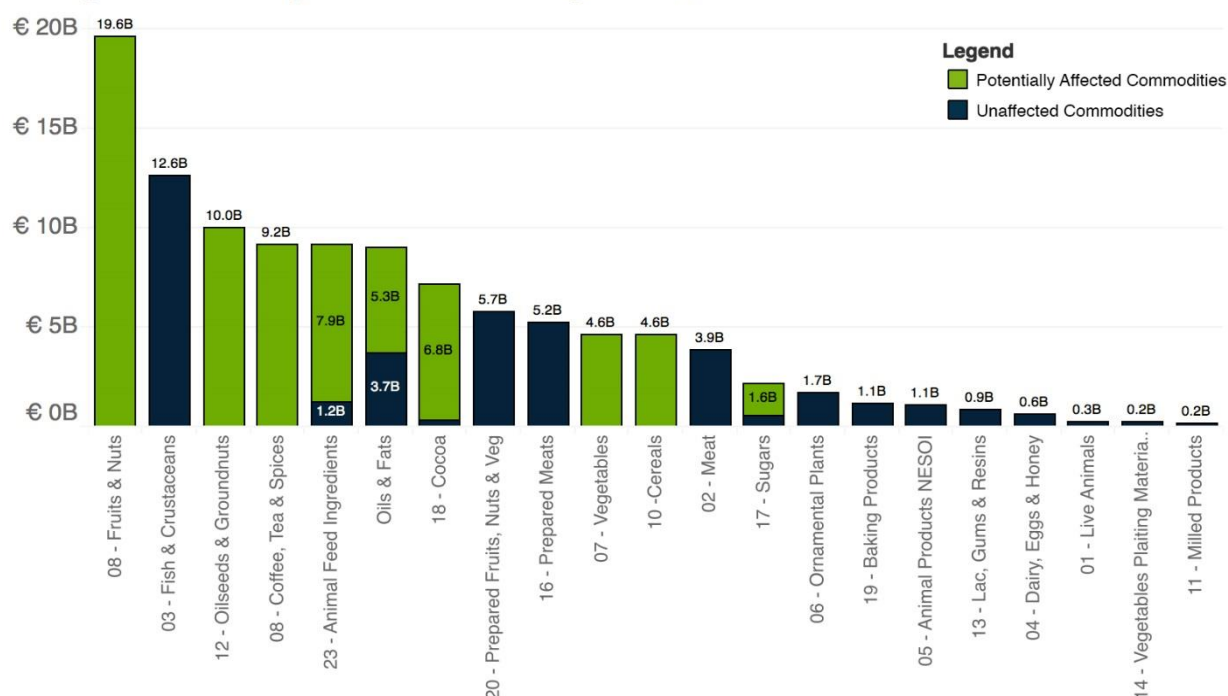
Cereals also constitute a notable portion of the potentially impacted trade. In 2016, the EU imported €10 billion in cereals. The Ukraine is the EU's single largest supplier of cereals, with €1.1 billion in corn shipments and €182 million in wheat shipments during 2016.

### European Union 2016 Covered Commodity Imports, Value in Euros



2-Digit HS Chapter	Value (Euros)
Fruit and Nuts	€ 19,642,346,515
Oilseeds and Groundnuts	€ 9,973,475,461
Coffee, Tea and Spices	€ 9,189,606,288
Vegetables	€ 7,938,742,228
Cocoa	€ 6,821,234,038
Vegetable Oil	€ 5,250,539,259
Vegetable	€ 4,637,451,203
Cereals	€ 4,636,635,964
Sugar	€ 1,640,912,537
<b>Grand Total</b>	<b>€ 69,730,943,493</b>

## All Agricultural Exports to the E.U. by Value, 2016



## 2016 World Exports to EU of Potentially Impacted Commodities by 4-Digit HS Codes

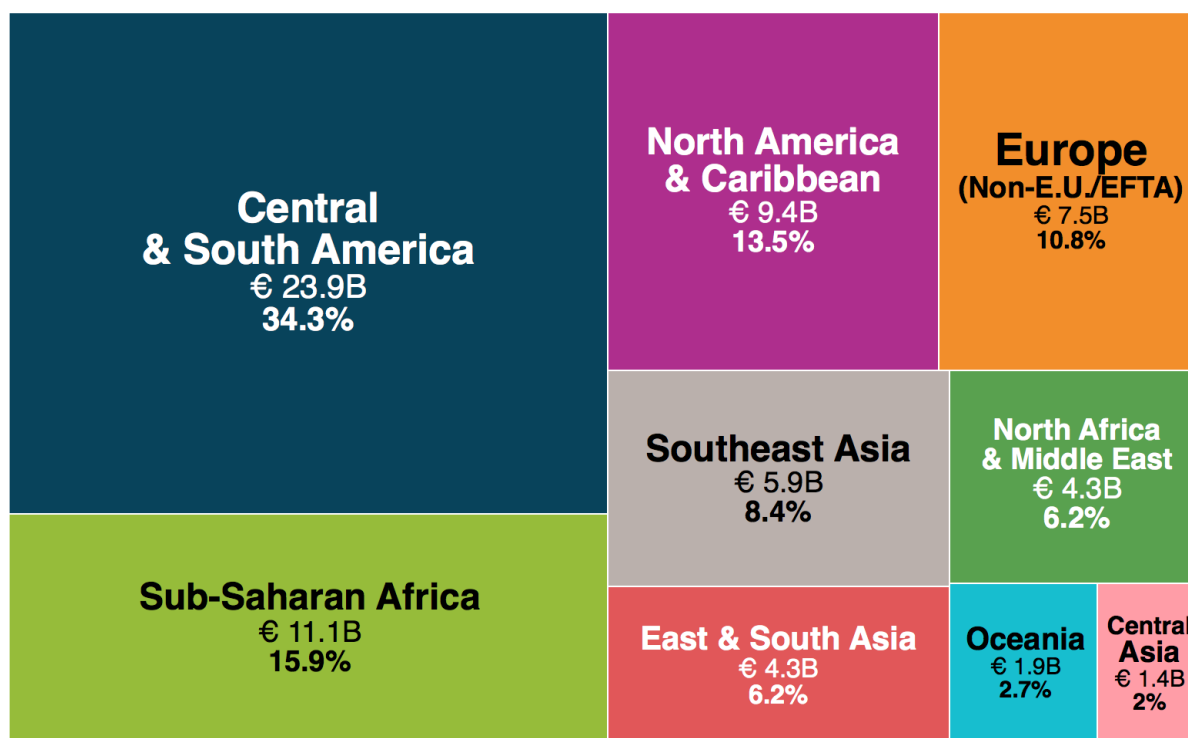
Commodity	Value (2016)	Commodity	Value (2016)
<b>07 Vegetables</b>	<b>€ 4,637,451,203</b>		
0701 - Potatoes	€ 151,966,608	0708 - Leguminous Veg.	€ 547,687,547
0702 - Tomatoes	€ 530,363,292	0709 - Veg. NESOI Fresh	€ 897,286,171
0703 - Onions etc.	€ 309,408,968	0710 - Veg. Frozen	€ 361,637,270
0704 - Cabbages	€ 44,981,390	0711 - Veg. Provisionally Preserved	€ 153,658,499
0705 - Lettuce	€ 5,219,757	0712 - Veg. Dried	€ 458,496,106
0706 - Carrots	€ 47,070,778	0713 - Dried Legumes	€ 858,199,956
0707 - Cucumbers	€ 45,394,759	0714 - High Starch Roots/Tubers	€ 226,080,102

<b>08 Fruits &amp; Nuts</b>	<b>€ 19,642,346,515</b>		
0801 - Coconuts, Brazil/Cashew	€ 1,195,386,675	0808 - Apples/Pears	€ 726,492,172
0802 - Tree Nuts	€ 4,291,983,935	0809 - Apricots, Cherries, Peaches	€ 396,844,706
0803 - Bananas	€ 3,507,710,186	0810 - Fruit NESOI	€ 1,196,912,054
0804 - Dates, Pineapples, Mangoes, Avocados	€ 2,610,746,916	0811 - Fruit/Nuts Frozen	€ 816,191,788
0805 - Citrus Fresh/Dried	€ 2,044,503,028	0812 - Fruits/Nuts Preserved	€ 13,317,051
0806 - Grapes Fresh/Dried	€ 1,832,643,975	0813 - Fruit Dried	€ 442,054,305
0807 - Melons	€ 553,357,500	0814 - Citrus/Melon Peel	€ 14,202,224

Continued next page

Commodity	Value (2016)	Commodity	Value (2016)
<b>09 Coffee, Tea, &amp; Spices</b>		<b>€ 9,189,606,288</b>	
0901 - Coffee	€ 6,998,783,552	0906 - Cinnamon	€ 35,756,317
0902 - Tea	€ 706,309,055	0907 - Cloves	€ 17,215,361
0903 - Mate	€ 10,728,721	0908 - Nutmeg/Mace	€ 62,084,636
0904 - Pepper	€ 708,288,180	0909 - Anise etc.	€ 80,844,043
0905 - Vanilla	€ 255,569,196	0910 - Ginger etc.	€ 314,027,227
<b>10 Cereals</b>		<b>€ 4,636,635,964</b>	
1001 - Wheat	€ 1,253,343,234	1005 - Maize	€ 2,119,520,984
1002 - Rye	€ 1,254,682	1006 - Rice	€ 1,043,550,520
1003 - Barley	€ 53,135,824	1007 - Sorghum	€ 20,783,898
1004 - Oats	€ 3,607,353	1008 - Buckwheat etc.	€ 141,439,469
<b>12 Oilseeds &amp; Groundnuts</b>		<b>€ 9,973,475,461</b>	
1201 - Soybeans	€ 5,345,128,263	1208 - Oilseed Flour	€ 18,777,102
1202 - Groundnuts	€ 799,170,806	1209 - Sowing Seeds	€ 621,362,920
1203 - Copra	€ 47,909	1210 - Hop Cones	€ 56,471,380
1204 - Flaxseed	€ 261,759,799	1211 - Plants for medicaments, etc.	€ 440,228,296
1205 - Rapeseed	€ 1,096,716,538	1212 - Locust Beans	€ 272,214,023
1206 - Sunflower Seed	€ 540,535,733	1213 - Cereal Straw	€ 4,570,653
1207 - Oilseed NESOI	€ 508,137,430	1214 - Other Forage	€ 8,354,609
<b>15 Vegetable Oils</b>		<b>€ 5,250,539,259</b>	
1507 - Soybean Oil	€ 95,244,365	1512 - Sun/Saf/Cotton Oil	€ 1,109,382,474
1508 - Peanut Oil	€ 90,427,305	1513 - Coconut Oil	€ 889,809,277
1509 - Olive Oil	€ 335,709,890	1514 - Rapeseed Oil	€ 38,627,113
1510 - Olive Residue Oil	€ 12,888,952	1515 - Veg. Oil NESOI	€ 497,034,304
1511 - Palm Oil	€ 2,037,404,885	1516 - Hydrogenated Oil	€ 144,010,694
<b>17 Sugar</b>		<b>€ 1,640,912,537</b>	
1701 - Cane/Beet Sugar	€ 1,430,026,993	1703 - Molasses	€ 210,885,544
<b>18 Cocoa</b>		<b>€ 6,821,234,038</b>	
1801 - Cocoa Beans	€ 4,851,418,822	1804 - Cocoa Butter	€ 1,038,280,518
1802 - Cocoa Shells/Husks	€ 6,316,012	1805 - Cocoa Powder	€ 93,268,821
1803 - Cocoa Paste	€ 831,949,865		
<b>23 Animal Feed Ingredients</b>		<b>€ 7,938,742,228</b>	
2302 - Cereal Bran	€ 13,114,627	2305 - Peanut Meal	€ 318,033
2303 - Starch/Sugar Residue	€ 312,666,986	2306 - Veg. Oilcake NESOI	€ 943,277,231
2304 - Soybean Meal	€ 6,317,001,621	2308 - Veg. Waste/Feed	€ 352,363,730
<b>Grand Total</b>		<b>€ 69,730,943,493</b>	

## European Union 2016 Covered Commodity Imports by Region, Value in Euros



Region	Value (Euros)
Central and South America	€ 23,889,812,620
Sub-Saharan Africa	€ 11,056,824,841
North America and the Caribbean	€ 9,426,205,514
Europe (Non-EU/EFTA)	€ 7,541,385,305
Southeast Asia	€ 5,866,583,594
East and South Asia	€ 4,349,063,821
North Africa and Middle East	€ 4,300,162,556
Oceania	€ 1,914,434,403
Central Asia	€ 1,386,470,839
<b>Grand Total</b>	<b>€ 69,730,943,493</b>

## Worldwide List of Trading Partners, Total 2016 Value of Potentially Affected Exports, and Top Potentially Affected Product Groups

Trading Partner	Top 3 Potentially Affected Product Groups	2016 Value of All Potentially Affected Exports
Afghanistan	Fruits, Vegetables, Oilseeds	€ 3,246,568
Albania	Vegetables, Oilseeds, Fruits	€ 40,446,192
Algeria	Sugar, Fruits, Cocoa	€ 83,994,361
Andorra	Coffee, Vegetable Oil, Fruits	€ 10,642
Angola	Coffee, Fruits	€ 515,001
Antigua & Barbuda	Coffee, Oilseeds, Cereals	€ 176,846
Argentina	Feed, Oilseeds, Fruits	€ 4,791,827,975
Armenia	Fruits, Cereals, Vegetable Oil	€ 26,667
Australia	Oilseeds, Fruits, Cereals	€ 944
Azerbaijan	Fruits, Oilseeds, Coffee	€ 845,291,386
Bahamas	Oilseeds, Fruits	€ 54,106,877
Bahrain	Fruits, Coffee	€ 283,114
Bangladesh	Vegetables, Fruits, Cereals	€ 9,714
Bangladesh	Vegetables, Fruits, Cereals	€ 13,108,956
Barbados	Sugar, Fruits, Feed	€ 451,402
Belarus	Vegetables, Fruits, Veg. Oil	€ 69,174,725
Belize	Fruits, Sugar, Feed	€ 94,165,333
Benin	Oilseeds, Fruits, Vegetable Oil	€ 13,196,660
Bolivia	Fruits, Feed, Cereals	€ 196,840,826
Bonaire	Fruits, Coffee	€ 9,329
Bosnia & Herzegovina	Fruits, Vegetables, Sugar	€ 61,957,488
Brazil	Feed, Coffee, Oilseeds	€ 8,032,209,441
Brunei	Coffee, Oilseeds, Fruits	€ 51,652
Burkina Faso	Fruits, Vegetable Oil, Oilseeds	€ 34,400,655
Burundi	Coffee, Fruits, Vegetables	€ 30,236,936
C.A.R.	Coffee, Vegetables, Oilseeds	€ 351,788
Cambodia	Cereals, Sugar, Coffee	€ 181,776,978
Cameroon	Cocoa, Fruits, Coffee	€ 731,969,230
Canada	Oilseeds, Cereals, Vegetables	€ 1,791,521,107
Cape Verde	Sugar, Fruits	€ 11,358
Cayman Islands	Feed, Vegetables, Coffee	€ 607,824
Chad	Oilseeds, Feed, Cereals	€ 197,708
Chile	Fruits, Oilseeds, Vegetables	€ 1,507,156,401
China	Vegetables, Oilseeds, Coffee	€ 2,147,078,417
Colombia	Fruits, Coffee, Vegetable Oil	€ 1,858,039,849
Comoros	Coffee, Feed, Cereals	€ 7,239,745
Congo	Coffee, Cocoa, Fruits	€ 18,714,780
Costa Rica	Fruits, Coffee, Vegetables	€ 1,405,790,189
Cote d'Ivoire	Cocoa, Fruits, Coffee	€ 3,487,240,900
Cuba	Sugar, Coffee, Cocoa	€ 112,741,454
Curacao	Sugar, Coffee	€ 973,754
Djibouti	Coffee, Oilseeds, Vegetables	€ 12,197,986
D.R. Congo	Cocoa, Coffee, Oilseeds	€ 33,557,033
Dominica	Cocoa, Vegetables, Fruits	€ 2,960,413
Dominican Republic	Fruits, Cocoa, Vegetables	€ 493,798,159
Ecuador	Fruits, Cocoa, Vegetables	€ 1,084,896,154
Egypt	Fruits, Vegetables, Oilseeds	€ 796,213,442

Trading Partner	Top 3 Potentially Affected Product Groups	2016 Value of All Potentially Affected Exports
El Salvador	Sugar, Coffee, Oilseeds	€ 57,256,807
Equatorial Guinea	Cocoa, Fruits, Feed	€ 931,353
Eritrea	N/A	€ 556
Ethiopia	Coffee, Vegetables, Oilseeds	€ 310,850,673
Faroe Islands	Oilseeds, Fruits, Feed	€ 134,503
Fiji	Sugar, Oilseeds, Coffee	€ 49,783,106
Macedonia	Vegetables, Fruits, Oilseeds	€ 77,705,146
French Polynesia	Oils, Coffee, Sugar	€ 10,763,553
Gabon	Vegetable Oil, Feed, Cereals	€ 201,780
Gambia	Veg. Oil, Fruits, Vegetables	€ 9,962,979
Georgia	Fruits, Vegetable Oil, Oilseeds	€ 132,629,668
Ghana	Cocoa, Fruits, Vegetable Oil	€ 1,592,746,572
Grenada	Coffee, Cocoa, Fruits	€ 4,837,153
Guam	Coffee, Oilseeds	€ 72,283
Guatemala	Vegetable Oil, Coffee, Fruits	€ 521,379,568
Guinea	Cocoa, Coffee, Fruits	€ 42,462,190
Guinea-Bissau	Fruits, Oilseeds, Feed	€ 122,745
Guyana	Cereals, Sugar, Vegetables	€ 117,792,155
Haiti	Cocoa, Fruits, Oilseeds	€ 7,373,775
Heard Island & McDonald Islands	Coffee, Feed, Cereals	€ 109,804
Honduras	Coffee, Vegetable Oil, Fruits	€ 815,601,209
Hong Kong	N/A	€ 8,084,765
India	Coffee, Fruits, Cereals	€ 1,876,144,723
Indonesia	Vegetable Oil, Coffee, Cocoa	€ 1,403,988,504
Iran	Fruits, Coffee, Cocoa	€ 364,887,905
Iraq	Fruits, Cereals, Oilseeds	€ 372,484
Israel	Fruits, Vegetables, Oilseeds	€ 629,621,397
Jamaica	Sugar, Coffee, Vegetables	€ 24,903,424
Japan	Oilseeds, Coffee, Cocoa	€ 69,134,355
Jordan	Vegetables, Fruits, Coffee	€ 18,540,561
Kazakhstan	Oilseeds, Cereals, Vegetables	€ 124,942,173
Kenya	Coffee, Vegetables, Fruits	€ 568,290,760
North Korea	N/A	€ 73
Kosovo	Vegetables, Oilseeds, Fruits	€ 4,827,434
Kuwait	Coffee, Fruits, Cereals	€ 46,159
Kyrgyzstan	Vegetables, Fruits, Oilseeds	€ 12,037,954
Laos	Sugar, Coffee, Cereals	€ 60,580,249
Lebanon	Coffee, Oilseeds, Fruits	€ 19,607,272
Lesotho	Fruits, Oilseeds, Feed	€ 1,592,954
Liberia	Cocoa, Coffee, Oilseeds	€ 90,293,644
Libya	Cereals, Fruits, Feed	€ 323,685
Macau	N/A	€ 3,418
Madagascar	Coffee, Fruits, Cocoa	€ 297,872,203
Malawi	Sugar, Coffee, Fruits	€ 58,315,937
Malaysia	Vegetable Oil, Feed, Cocoa	€ 979,326,489
Mali	Fruits, Oilseeds, Vegetables	€ 10,366,349
Marshall Islands	Vegetables	€ 5,200
Mauritania	Fruits, Feed, Cereals	€ 214,532
Mauritius	Sugar, Fruits, Coffee	€ 196,608,326
Mexico	Fruits, Coffee, Vegetables	€ 633,741,803
Moldova	Cereals, Oilseeds, Fruits	€ 384,733,794

Trading Partner	Top 3 Potentially Affected Product Groups	2016 Value of All Potentially Affected Exports
Mongolia	Oilseeds, Fruits, Coffee	€ 55,574
Montenegro	Vegetables, Oilseeds, Fruits	€ 4,098,789
Morocco	Vegetables, Fruits, Oilseeds	€ 1,649,097,324
Mozambique	Sugar, Fruits, Vegetables	€ 85,295,846
Myanmar	Cereals, Vegetables, Oilseeds	€ 77,493,793
Namibia	Fruits, Oilseeds, Vegetables	€ 56,019,893
Nepal	Coffee, Vegetables, Oilseeds	€ 2,261,183
New Caledonia	Cocoa, Coffee, Oilseeds	€ 701,640
New Zealand	Fruits, Oilseeds, Vegetables	€ 487,279,003
Nicaragua	Coffee, Oilseeds, Sugar	€ 159,999,399
Niger	Vegetables, Cereals, Oilseeds	€ 2,313,961
Nigeria	Cocoa, Oilseeds, Coffee	€ 613,373,237
Niue	Oilseeds, Feed, Cereals	€ 15,381
Oman	Fruits, Veg. Oil, Vegetables	€ 664,664
Pakistan	Cereals, Fruits, Vegetables	€ 213,171,362
Palestinian Territories	Fruits, Veg. Oil, Oilseeds	€ 13,427,989
Panama	Fruits, Vegetable Oil, Coffee	€ 135,120,355
Papua New Guinea	Oils, Coffee, Cocoa	€ 499,313,070
Paraguay	Feed, Oilseeds, Sugar	€ 851,076,134
Peru	Fruits, Coffee, Vegetables	€ 1,834,208,016
Philippines	Vegetable Oil, Fruits, Sugar	€ 549,814,911
Qatar	Veg. Oil, Coffee, Oilseeds	€ 70,180
Russia	Feed, Cereals, Oilseeds	€ 1,036,121,665
Rwanda	Coffee, Vegetables, Veg. Oil	€ 37,756,384
Sao Tome & Principe	Cocoa, Coffee, Feed	€ 9,735,579
Saudi Arabia	Fruits, Sugar, Vegetable Oil	€ 5,844,372
Senegal	Vegetables, Fruits, Veg. Oil	€ 103,771,537
Serbia	Fruits, Cereals, Sugar	€ 806,548,969
Seychelles	N/A	€ 685
Sierra Leone	Cocoa, Coffee, Vegetable Oil	€ 36,773,387
Singapore	Coffee, Cocoa, Vegetable Oil	€ 26,458,438
Sint Maarten	Vegetables, Veg. Oil, Oilseeds	€ 17,006
Solomon Islands	Cocoa, Oilseeds, Oils	€ 20,766,303
Somalia	Vegetables, Fruits, Oilseeds	€ 310,418
South Korea	Vegetables, Oilseeds, Coffee	€ 19,703,827
South Africa	Vegetables, Veg. Oil, Fruits	€ 1,773,244,452
Sri Lanka	Coffee, Vegetable Oil, Fruits	€ 202,750,875
Sudan	Sugar, Oilseeds, Vegetable Oil	€ 86,015,300
St. Lucia	Fruits, Vegetables, Cocoa	€ 5,819,483
St. Vincent & Grenadines	Vegetables, Oilseeds, Coffee	€ 796,991
St. Kitts and Nevis	N/A	€ 144
Suriname	Fruits, Cereals, Vegetables	€ 55,264,014
Swaziland	Sugar, Fruits, Vegetable Oil	€ 97,999,969
South Sudan		€ 71,723
Syria	Vegetable Oil, Coffee, Fruits	€ 43,497,762
Taiwan	Oilseeds, Coffee, Fruits	€ 10,747,297
Tajikistan	Oilseeds, Fruits	€ 445,116
Tanzania	Coffee, Cocoa, Fruits	€ 129,852,892
Thailand	Cereals, Fruits, Vegetables	€ 355,527,792
Timor-Leste	Coffee	€ 4,999,245
Togo	Cocoa, Veg. Oil, Oilseeds	€ 62,708,236

Trading Partner	Top 3 Potentially Affected Product Groups	2016 Value of All Potentially Affected Exports
Tokelau	Oilseeds	€ 1,301
Tonga	N/A	€ 64
Trinidad & Tobago	Cocoa, Vegetables, Coffee	€ 712,281
Tunisia	Veg. Oil, Fruits, Vegetables	€ 433,528,898
Turkey	Fruits, Vegetables, Oilseeds	€ 2,491,039,835
Turkmenistan	Fruits, Vegetables, Feed	€ 10,796
Uganda	Coffee, Cocoa, Vegetables	€ 295,705,333
Ukraine	Cereals, Veg. Oil, Oilseeds	€ 3,600,707,788
United Arab Emirates	Coffee, Sugar, Fruits	€ 26,755,588
United States	Fruits, Oilseeds, Cereals	€ 6,344,154,629
Uruguay	Oilseeds, Fruits, Cereals	€ 363,366,378
Uzbekistan	Fruits, Oilseeds, Vegetables	€ 22,903,355
Vanuatu	Oilseeds, Oils, Cocoa	€ 404,834
Venezuela	Cocoa, Oilseeds, Fruits	€ 7,822,417
Vietnam	Coffee, Fruits, Cereals	€ 2,226,555,901
Virgin Islands (U.S.)	Coffee, Cereals, Oilseeds	€ 26,382
Virgin Islands (British)	Feed	€ 225,572
Yemen	Coffee, Sugar, Oilseeds	€ 487,437
Western Sahara	N/A	€ 5
Zambia	Sugar, Vegetables, Coffee	€ 21,051,974
Zimbabwe	Sugar, Fruits, Vegetables	€ 94,160,697



## CENTRAL AND SOUTH AMERICA

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Among the nine world regions featured in this report, the Central and South American region has the greatest exposure to potential trade impacts from hazard-based cut-off criteria under EC Regulation 1107/2009. Central and South American countries shipped €23.9 billion of the potentially impacted EU imports in 2016 – 34.3 percent of the global total.<sup>4</sup>

The graphs below present the 2016 value of EU imports of potentially impacted goods on a country-by-country basis and provide regional totals for major commodity groups. EU imports from the region are dominated by soymeal, soybeans, coffee, and tropical fruits.

Central and South America produce 79.4 percent (€6.3 billion) of the EU's imports of animal feed ingredients from the world. This activity is largely driven by shipments of soybeans and soy products from Brazil and Argentina.

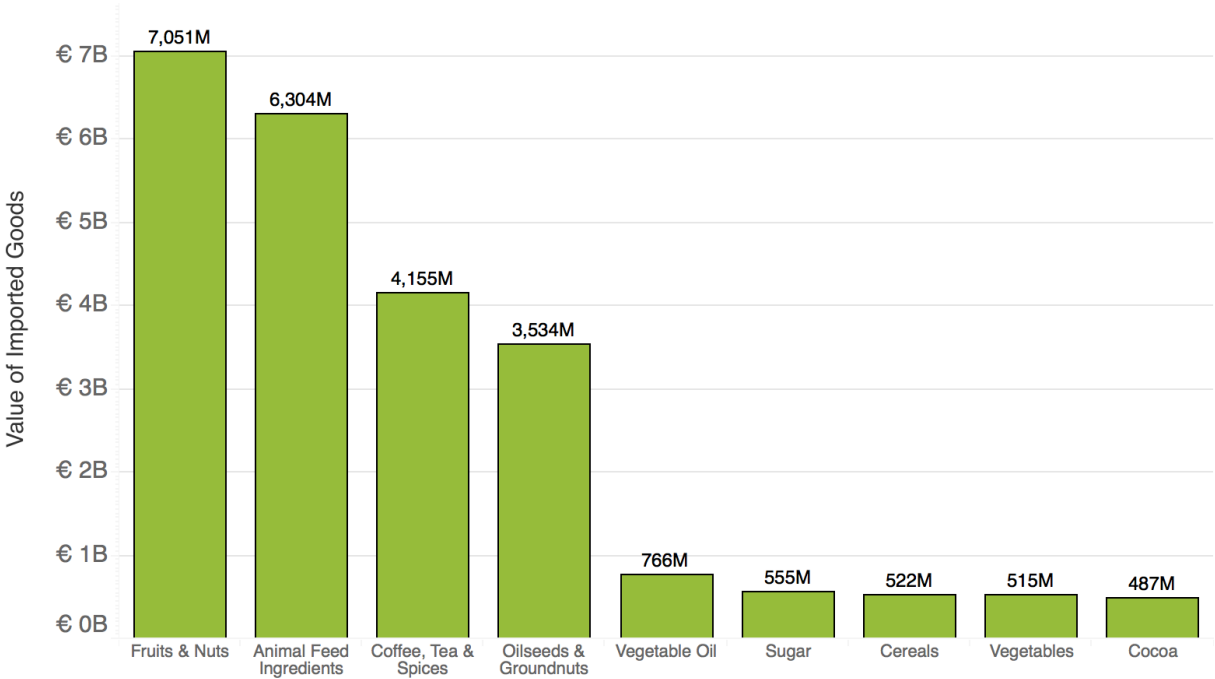
Brazil is the single largest exporter to the EU of the relevant agricultural products. Brazil exported €8 billion of the affected products in 2016. That is 11.5 percent of the worldwide total. Brazil is the EU's largest supplier of sugar, providing €241 million in 2016. Argentina shipped €4.8 billion of the potentially affected commodities to the EU. Combined, Brazil and Argentina account for 53.6 percent of the regional total of EU imports in the potentially affected commodity groups.

Central and South America are also a major exporter to the EU of coffee, fruits, and nuts that could be impacted by EC Regulation 1107/2009. Countries within Central and South America exported €4 billion worth of coffee to the EU in 2016, 56.6 percent of total EU coffee imports from the world. Central and South American countries shipped 39 percent (€5.4 billion) of the fruits and nuts imported by the EU from the world. This trade relationship provides the EU with 75 percent (€2.7 billion) of its banana imports and 58 percent (€1.5 billion) of all EU imports of tropical fruits (HST-0804) such as dates, pineapples, avocados, guavas, and mangoes.

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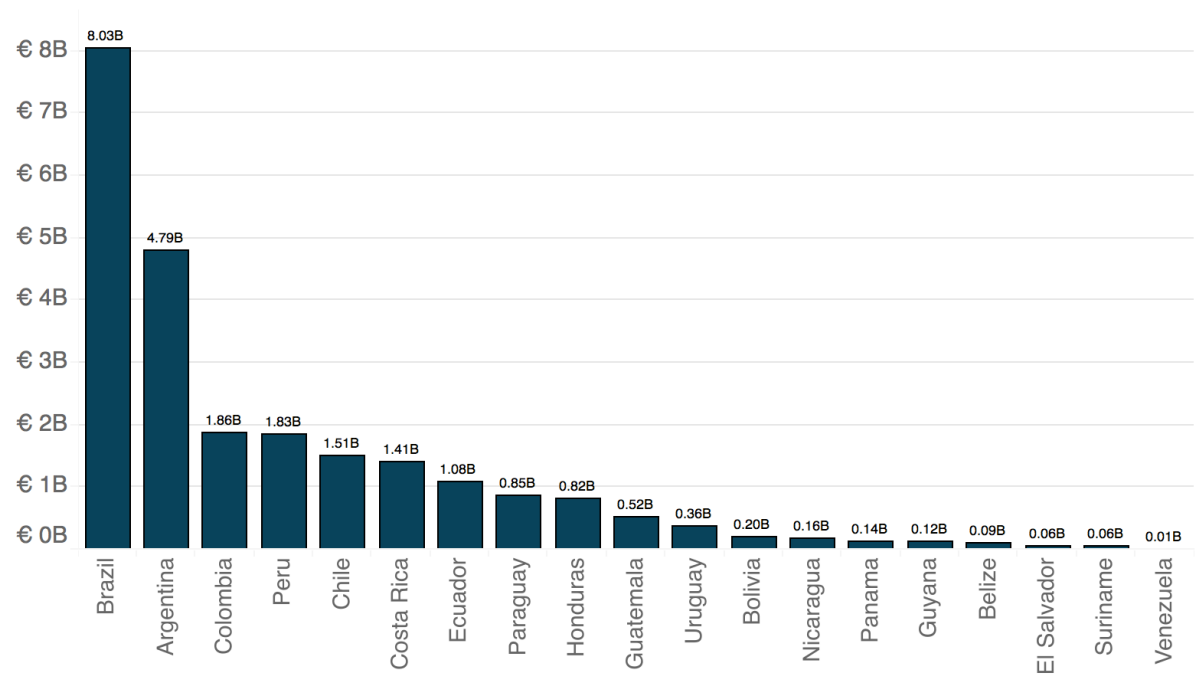
<sup>4</sup> All trade data sourced from the Eurostat Comext database, October 2017.

Major Affected Commodity Groups: Central and South America

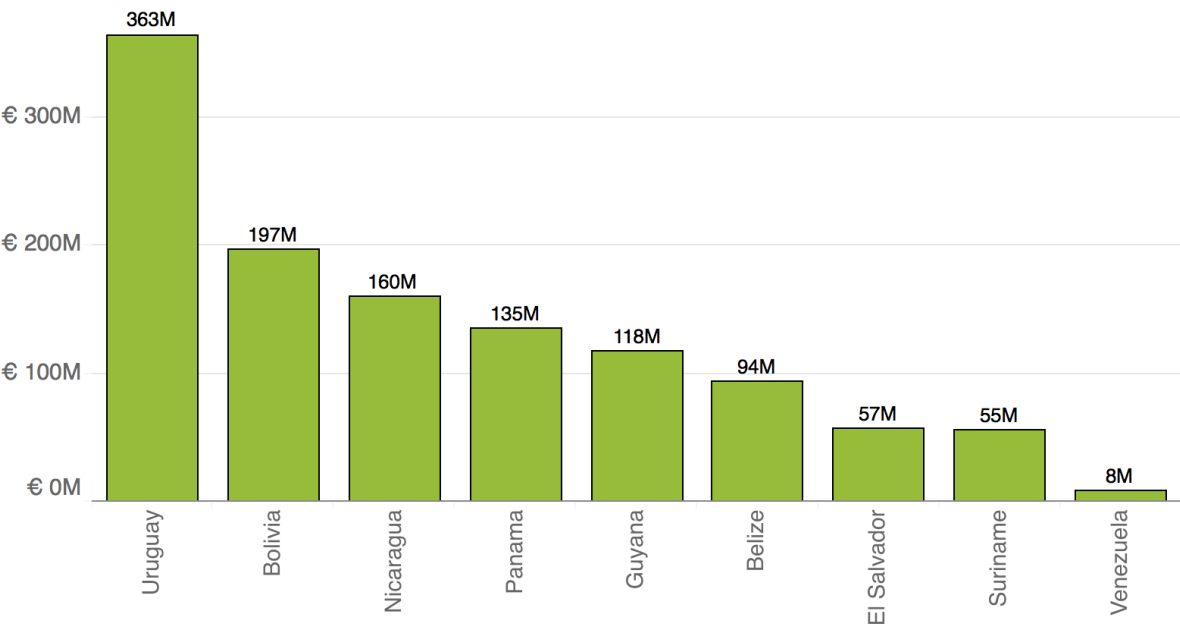


Product Group	EU Imports from Central & South America	EU Imports from World	Percent of World Total
Fruits and Nuts	7,051,383,287	19,642,346,515	35.9%
Animal Feed Ingredients	6,303,522,315	7,938,742,228	79.4%
Coffee, Tea and Spices	4,154,963,182	9,189,606,288	45.2%
Oilseeds and Groundnuts	3,533,961,502	9,973,475,461	35.4%
Vegetable Oil	766,302,486	5,250,539,259	14.6%
Sugar	555,296,388	1,640,912,537	33.8%
Cereals	521,977,886	4,636,635,964	11.3%
Vegetables	515,254,241	4,637,451,203	11.1%
Cocoa	487,151,333	6,821,234,038	7.1%
Grand Total	€ 23,889,812,620	€ 69,730,943,493	34.3%

Potential Trade Effects by Country: Central and South America



Imports from Countries Below Median Regional Value: Central and South America



## EU Imports of Relevant Commodities and Three Largest Products by Country (Totalling €21.638 billion of €23.890 billion in potentially affected commodities)



Partner	Top 3 Product Groups	Value of Top 3
Brazil	Feed, Coffee, Oilseeds	€ 6,825,793,214
Argentina	Feed, Oilseeds, Fruits	€ 4,484,682,887
Colombia	Fruits, Coffee, Vegetable Oil	€ 1,776,323,547
Peru	Fruits, Coffee, Vegetables	€ 1,520,467,137
Chile	Fruits, Oilseeds, Vegetables	€ 1,471,133,089
Costa Rica	Fruits, Coffee, Vegetables	€ 1,385,863,909
Ecuador	Fruits, Cocoa, Vegetables	€ 1,052,174,558
Paraguay	Feed, Oilseeds, Sugar	€ 843,603,144
Honduras	Coffee, Vegetable Oil, Fruits	€ 783,030,663
Guatemala	Vegetable Oil, Coffee, Fruits	€ 392,737,795
Uruguay	Oilseeds, Fruits, Cereals	€ 347,681,602
Bolivia	Fruits, Feed, Cereals	€ 173,264,527
Panama	Fruits, Vegetable Oil, Coffee	€ 129,202,224
Nicaragua	Coffee, Oilseeds, Sugar	€ 120,534,361
Guyana	Cereals, Sugar, Vegetables	€ 117,710,662
Belize	Fruits, Sugar, Feed	€ 93,787,285
El Salvador	Sugar, Coffee, Oilseeds	€ 57,123,340
Suriname	Fruits, Cereals, Vegetables	€ 55,101,150
Venezuela	Cocoa, Oilseeds, Fruits	€ 7,757,275

## SUB-SAHARAN AFRICA

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Sub-Saharan Africa supplied the EU with €11.1 billion of commodities in 2016 that are potentially affected by cut-off criteria under EC Regulation 1107/2009 – 15.9 percent of the global total.<sup>5</sup> The graphs below present the 2016 value of EU imports of potentially impacted goods on a country-by-country basis and provide regional totals for major commodity groups. EU imports from the region are dominated by cocoa, coffee, sugar, and fruits.

Sub-Saharan Africa produces an overwhelming majority of Europe's cocoa supplies. As of 2016, 84.5 percent (€5.8 billion) of the EU's imports of cocoa were imported from the region. Cote d'Ivoire is the region's largest exporter of cocoa to the EU, shipping 42 percent of the global total and 55 percent of the regional total in 2016. Ghana is another major exporter of cocoa to the EU, shipping €1.4 billion in 2016.

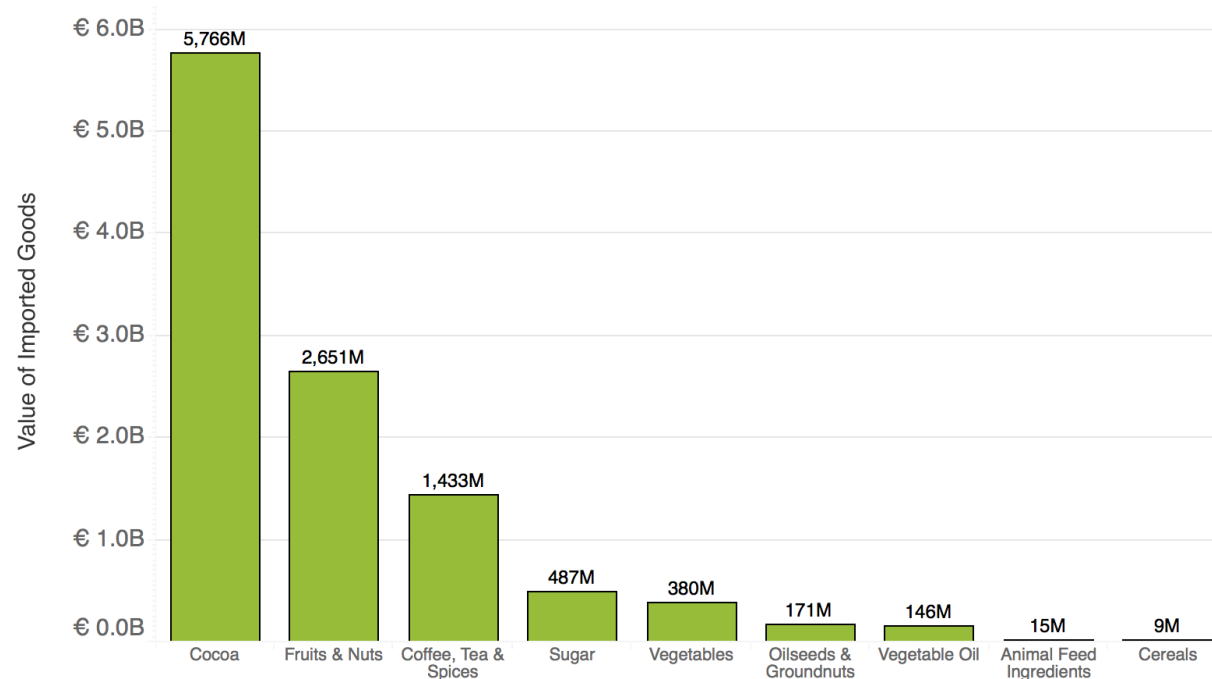
Sub-Saharan Africa is also a major exporter to the EU of coffee, spices, sugar, and fruits that could be impacted by EC Regulation 1107/2009. The EU sources 29.7 percent of its sugar imports, valued at €487 million, from Sub-Saharan Africa. The largest sugar-exporting country in the region is Mauritius with €185 million exported to the EU in 2016. The region's top-5 sugar producers (Mauritius, Swaziland, Mozambique, Sudan, and Zimbabwe) supplied the EU with €429 million of sugar exports.

Countries within Sub-Saharan Africa exported €2.7 billion worth of fruits and nuts to the EU in 2016. This region also provided the EU with 31 percent (€633 million) of its citrus imports. South Africa alone provided the EU with €602 million in citrus fruits in 2016. South Africa's combined exports of fruits and nuts to the EU equaled €1.7 billion. Sub-Saharan Africa supplied the EU with 28.7 percent (€526 million) of its grape imports, 28.1 percent (€111 million) of all EU imports of stone fruits, and €517 million worth of EU banana imports. Sub-Saharan African countries shipped 86 percent (€220 million) of the vanilla imported by the EU from the world.

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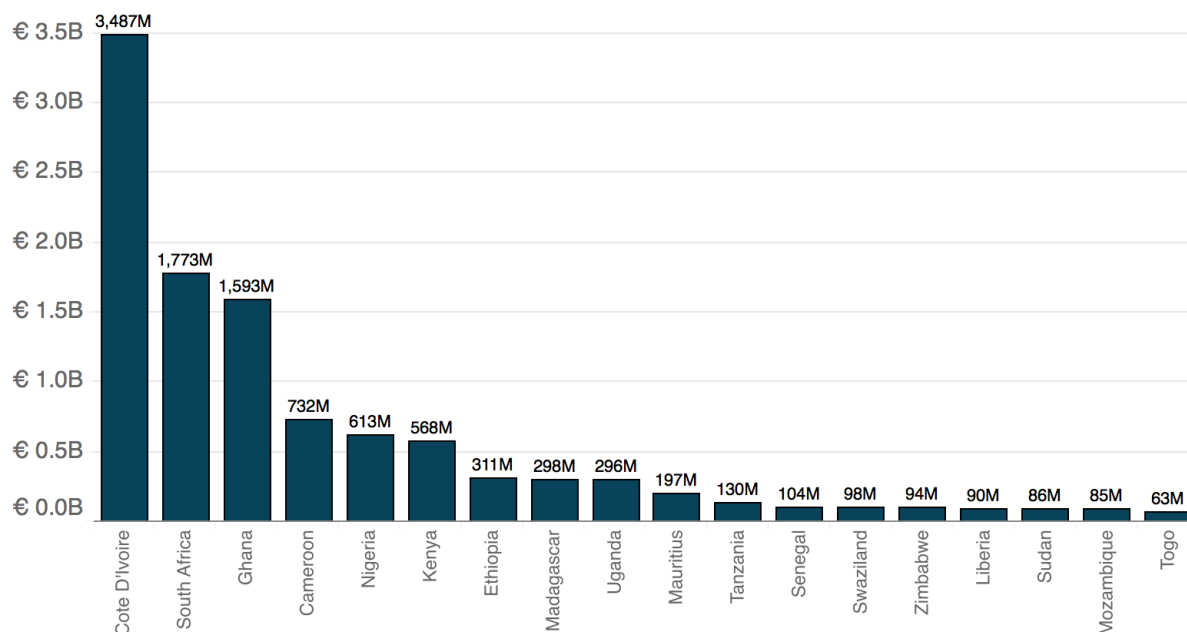
<sup>5</sup> All trade data sourced from the Eurostat Comext database, October 2017.

## Major Affected Commodity Groups: Sub-Saharan Africa

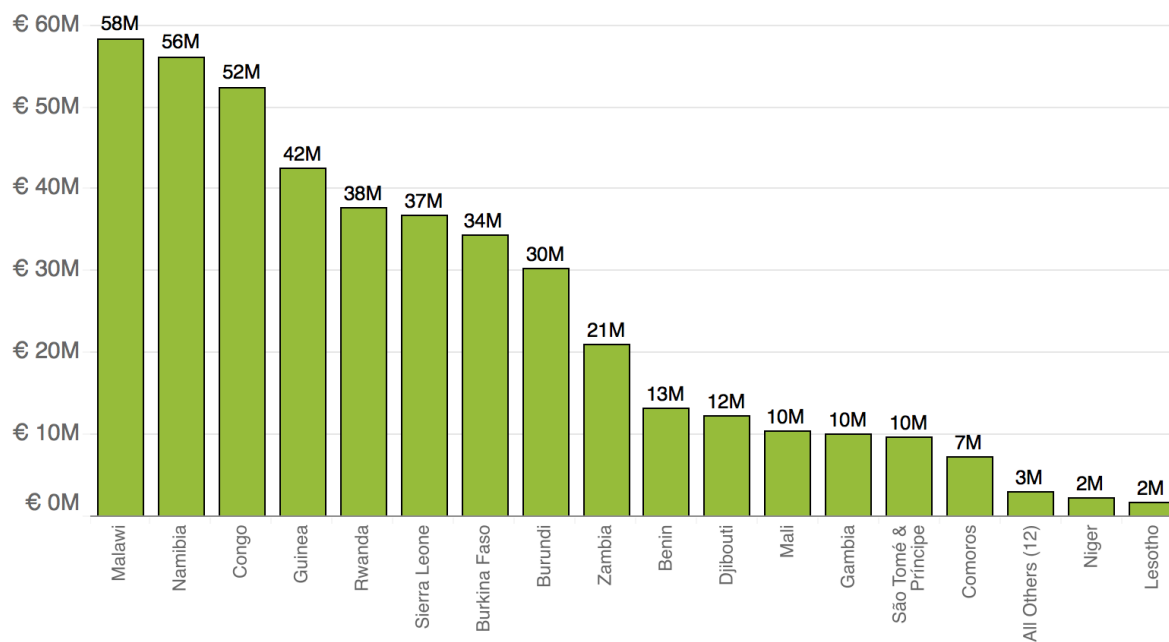


Product Group	EU Imports from Sub-Saharan Africa	EU Imports from World	Percent of World Total
Cocoa	5,765,605,393	6,821,234,038	84.5%
Fruits and Nuts	2,651,016,205	19,642,346,515	13.5%
Coffee, Tea and Spices	1,432,512,909	9,189,606,288	15.6%
Sugar	487,499,146	1,640,912,537	29.7%
Vegetables	379,649,173	4,637,451,203	8.2%
Oilseeds and Groundnuts	170,859,801	9,973,475,461	1.7%
Vegetable Oil	145,778,021	5,250,539,259	2.8%
Animal Feed Ingredients	14,861,701	7,938,742,228	0.2%
Cereals	9,042,492	4,636,635,964	0.2%
<b>Grand Total</b>	<b>€ 11,056,824,841</b>	<b>€ 69,730,943,493</b>	<b>15.9%</b>

## Imports from Countries Above Median Regional Value: Sub-Saharan Africa



## Imports from Countries Below Median Regional Value: Sub-Saharan Africa



*Note:* For the purpose of establishing a regional median value, BCI eliminated countries for whom the combined total imports to the EU of impacted commodity groups was less than €1 million. In the graph above, countries of Sub-Saharan Africa with less than €1 million have been consolidated under the category “All Others (12).”

# **EU Imports of Relevant Commodities and Three Largest Products by Country** (Totaling €10.839 billion of €11.057 billion in potentially affected commodities)



Partner	Top 3 Product Groups	Value of Top 3
Cote d'Ivoire	Cocoa, Fruits, Coffee	€ 3,431,139,407
Somalia	Vegetables, Fruits, Oilseeds	€ 1,725,188,582
Ghana	Cocoa, Fruits, Vegetable Oil	€ 1,573,477,262
Cameroon	Cocoa, Fruits, Coffee	€ 725,241,077
Nigeria	Cocoa, Oilseeds, Coffee	€ 606,937,519
Kenya	Coffee, Vegetables, Fruits	€ 552,476,824
Ethiopia	Coffee, Vegetables, Oilseeds	€ 305,610,047
Uganda	Coffee, Cocoa, Vegetables	€ 285,161,445
Madagascar	Coffee, Fruits, Cocoa	€ 280,070,546
Mauritius	Sugar, Fruits, Coffee	€ 195,801,022
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Partner	Top 3 Product Groups	Value of Top 3
Tanzania	Coffee, Cocoa, Fruits	€ 111,645,809
Senegal	Vegetables, Fruits, Veg. Oil	€ 102,613,256
Swaziland	Sugar, Fruits, Vegetable Oil	€ 97,999,969
Liberia	Cocoa, Coffee, Oilseeds	€ 90,283,209
Zimbabwe	Sugar, Fruits, Vegetables	€ 86,831,064
Sudan	Sugar, Oilseeds, Vegetable Oil	€ 85,157,197
Mozambique	Sugar, Fruits, Vegetables	€ 79,551,301
Malawi	Sugar, Coffee, Fruits	€ 56,241,537
Namibia	Fruits, Oilseeds, Vegetables	€ 55,872,393
Togo	Cocoa, Veg. Oil, Oilseeds	€ 50,839,219
Guinea	Cocoa, Coffee, Fruits	€ 41,860,061
Rwanda	Coffee, Vegetables, Veg. Oil	€ 37,700,477
Sierra Leone	Cocoa, Coffee, Vegetable Oil	€ 36,404,645
D.R. Congo	Cocoa, Coffee, Oilseeds	€ 33,134,218
Burkina Faso	Fruits, Vegetable Oil, Oilseeds	€ 31,130,181
Burundi	Coffee, Fruits, Vegetables	€ 30,153,318
South Africa	Vegetables, Veg. Oil, Fruits	€ 22,359,448
Zambia	Sugar, Vegetables, Coffee	€ 20,594,951
Congo	Coffee, Cocoa, Fruits	€ 18,577,770
Benin	Oilseeds, Fruits, Vegetable Oil	€ 12,901,638
Djibouti	Coffee, Oilseeds, Vegetables	€ 12,102,397
Mali	Fruits, Oilseeds, Vegetables	€ 10,232,443
Gambia	Veg. Oil, Fruits, Vegetables	€ 9,961,984
Sao Tome & Principe	Cocoa, Coffee, Feed	€ 9,735,579
Comoros	Coffee, Feed, Cereals	€ 7,239,745
Niger	Vegetables, Cereals, Oilseeds	€ 2,313,938
Lesotho	Fruits, Oilseeds, Feed	€ 1,592,954
Equatorial Guinea	Cocoa, Fruits, Feed	€ 931,353
Angola	Coffee, Fruits	€ 513,949
C.A.R.	Coffee, Vegetables, Oilseeds	€ 351,788
Mauritania	Fruits, Feed, Cereals	€ 214,532
Gabon	Vegetable Oil, Feed, Cereals	€ 201,780
Chad	Oilseeds, Feed, Cereals	€ 197,708
Guinea-Bissau	Fruits, Oilseeds, Feed	€ 122,745
Cape Verde	Sugar, Fruits	€ 10,501

## NORTH AMERICA AND THE CARIBBEAN

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North America and the Caribbean supply the EU with €9.4 billion of commodities that are potentially affected by cut-off criteria under EC Regulation 1107/2009 – 13.5 percent of the global total.<sup>6</sup> The graphs below present the 2016 value of EU imports of potentially impacted goods on a country-by-country basis and provide regional totals for major commodity groups. EU imports from the region are dominated by oilseeds, soy products, cereals, fruits, nuts, and legumes.

The United States is the EU's second largest foreign supplier of the commodities potentially effected by regulation 1107/2009. In 2016, the EU imported €6.3 billion of the relevant commodities from the U.S. Among the potentially affected commodities, the top U.S. exports to the EU were tree nuts/almonds (€2.4 billion), soybeans (€2 billion), and wheat (€208 million).

In 2016, the North America and Caribbean region produced 33.6 percent of Europe's supply of imported oilseeds and groundnuts. The region provided €2.4 billion worth of soybeans – 45 percent of the total imported into the EU globally. €2 billion worth of soybeans were imported from the U.S. The remaining €436 million in soybeans were imported from Canada. The region supplies the EU with many oilseeds/groundnuts beyond soybeans. The United States is a leading supplier of sunflower seeds (22.8 percent of global total), while Canada is a significant supplier of rapeseed (19.6 percent of global total).

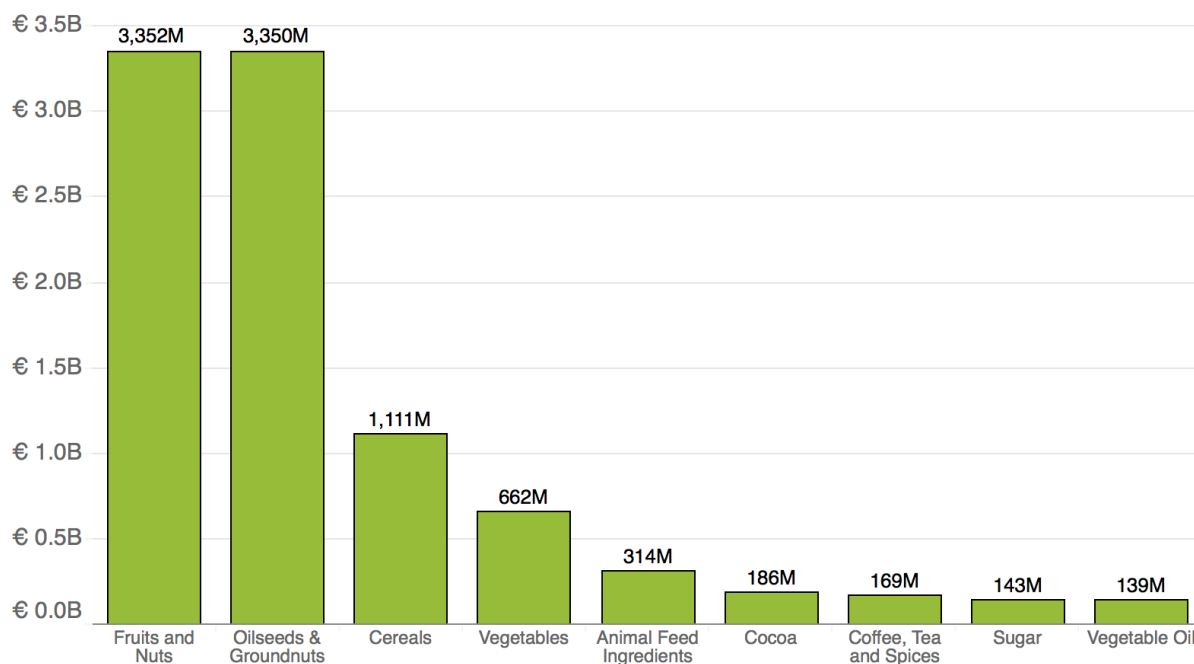
The North America and Caribbean region is also a major exporter to the EU of cereals, fruits, nuts, and legumes that could be impacted by EC Regulation 1107/2009. The EU sources about 60 percent of its wheat imports, valued at €1.25 billion, from North America. Canada alone ships 38 percent (€484 million) of the EU's total wheat imports.

The Caribbean islands shipped a combined €657 million worth of the relevant commodities in 2016. The Dominican Republic is the largest exporter among the Caribbean islands. A majority of exports to the EU from the Caribbean islands (€342 million) are shipped in the form of bananas from the Dominican Republic. Other significant export flows to the EU from these islands include cocoa from the Dominican Republic (€142 million) and sugar from Cuba (€105 million).

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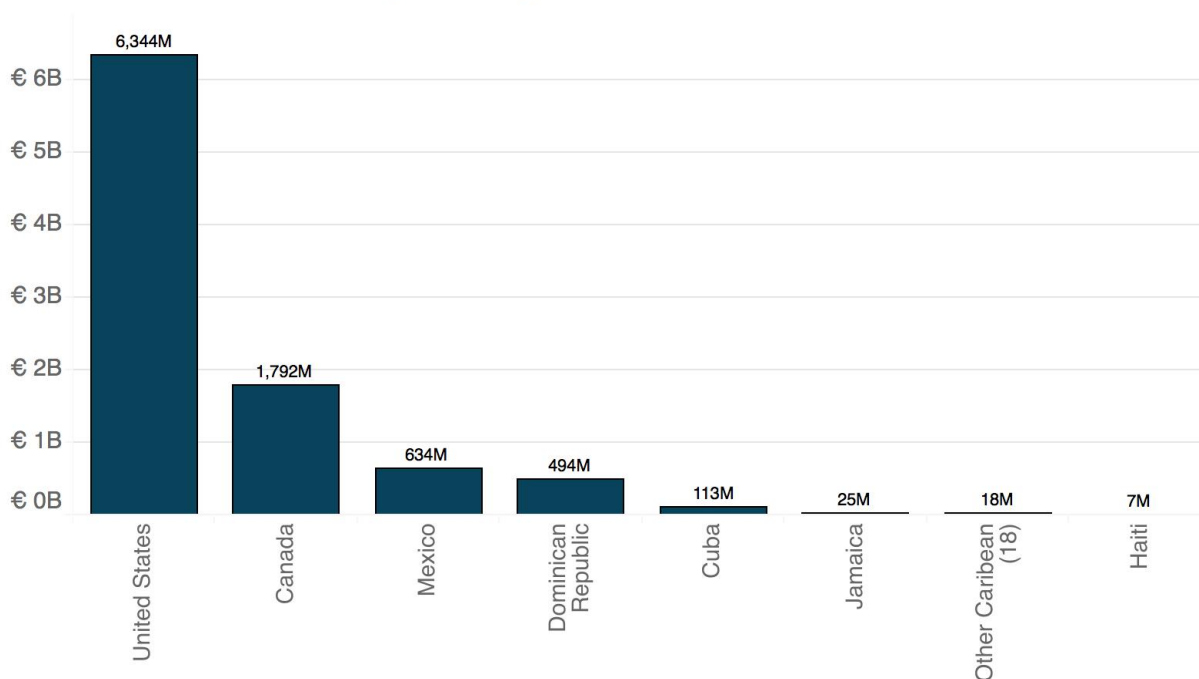
<sup>6</sup> All trade data sourced from the Eurostat Comext database, October 2017.

## Major Affected Commodity Groups: North America and Caribbean

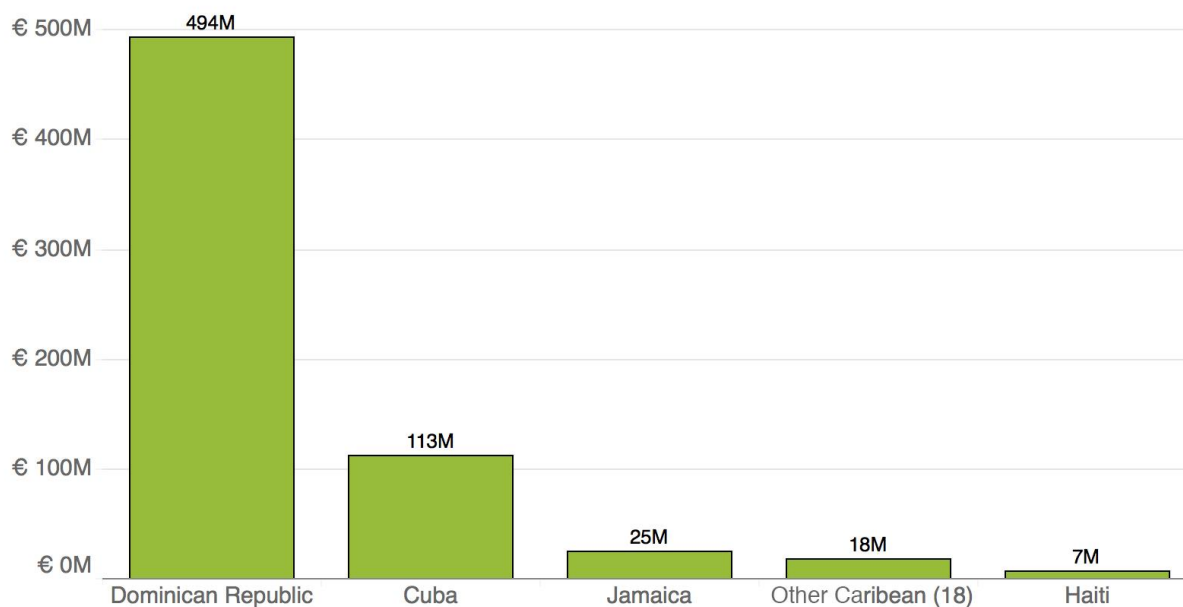


Product Group	EU Imports from North America & the Caribbean	EU Imports from World	Percent of World Total
Fruits and Nuts	3,351,699,085	19,642,346,515	17.1%
Oilseeds and Groundnuts	3,350,459,725	9,973,475,461	33.6%
Cereals	1,111,473,968	4,636,635,964	24.0%
Vegetables	661,961,367	4,637,451,203	14.3%
Animal Feed Ingredients	313,555,585	7,938,742,228	3.9%
Cocoa	185,539,921	6,821,234,038	2.7%
Coffee, Tea and Spices	168,897,407	9,189,606,288	1.8%
Sugar	143,133,775	1,640,912,537	8.7%
Vegetable Oil	139,484,681	5,250,539,259	2.7%
<b>Grand Total</b>	<b>€ 9,426,205,514</b>	<b>€ 69,730,943,493</b>	<b>13.5%</b>

## Potential Trade Effects by Country: North America and Caribbean



## Imports from Countries Below Median Regional Value: North America and Caribbean



*Note:* For the purpose of establishing a regional median value, BCI eliminated countries for whom the combined total imports to the EU of impacted commodity groups was less than €1 million. In the graph above, North American and Caribbean countries with less than €1 million have been consolidated under the category “Others Caribbean (18).”

## EU Imports of Relevant Commodities and Three Largest Products by Country (Totaling €8.400 billion of €9.426 billion in potentially affected commodities)



Partner	Top 3 Product Groups	Value of Top 3
United States	Fruits, Oilseeds, Cereals	€ 5,567,933,474
Canada	Oilseeds, Cereals, Vegetables	€ 1,673,658,778
Mexico	Fruits, Coffee, Vegetables	€ 491,638,173
Dominican Republic	Fruits, Cocoa, Vegetables	€ 490,323,046
Cuba	Sugar, Coffee, Cocoa	€ 110,550,763
Saint Maarten	Vegetables, Veg. Oil, Oilseeds	€ 20,781,298
Jamaica	Sugar, Coffee, Vegetables	€ 20,185,185
Haiti	Cocoa, Fruits, Oilseeds	€ 7,243,102
St. Lucia	Fruits, Vegetables, Cocoa	€ 5,795,310
Grenada	Coffee, Cocoa, Fruits	€ 4,799,824
Dominica	Cocoa, Vegetables, Fruits	€ 2,887,810
Curacao	Sugar, Coffee	€ 973,710
St. Vincent & Grenadines	Vegetables, Oilseeds, Coffee	€ 796,991
Trinidad & Tobago	Cocoa, Vegetables, Coffee	€ 712,179
Cayman Islands	Feed, Vegetables, Coffee	€ 607,824
Barbados	Sugar, Fruits, Feed	€ 442,407
Bahamas	Oilseeds, Fruits	€ 282,761
Virgin Islands (British)	Feed	€ 225,572
Antigua & Barbuda	Coffee, Oilseeds, Cereals	€ 172,585
Guam	Coffee, Oilseeds	€ 72,283
Virgin Islands (U.S.)	Coffee, Cereals, Oilseeds	€ 26,329
Bonaire	Fruits, Coffee	€ 9,329

## SOUTHEAST ASIA

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Southeast Asia supplies the EU with €5.9 billion of commodities that are potentially affected by hazard-based cut-off criteria under EC Regulation 1107/2009 – 13.5 percent of the global total.<sup>7</sup> The graphs below present the 2016 value of EU imports of potentially impacted goods on a country-by-country basis and provide regional totals for major commodity groups. EU imports from the region are concentrated in vegetable oils, coffee, spices, fruits, and nuts.

Coffee is Southeast Asia's largest export to the EU among the relevant commodities. Shipments of coffee from this region to the EU had a total value of €1.5 billion in 2016. Most of Southeast Asia's coffee shipments to the EU come from Vietnam which exported €1.2 billion to the EU. Indonesia supplied €240 million of coffee. Southeast Asia exported €424 million in spices to Europe, the largest subset being shipments of pepper (€323 million).

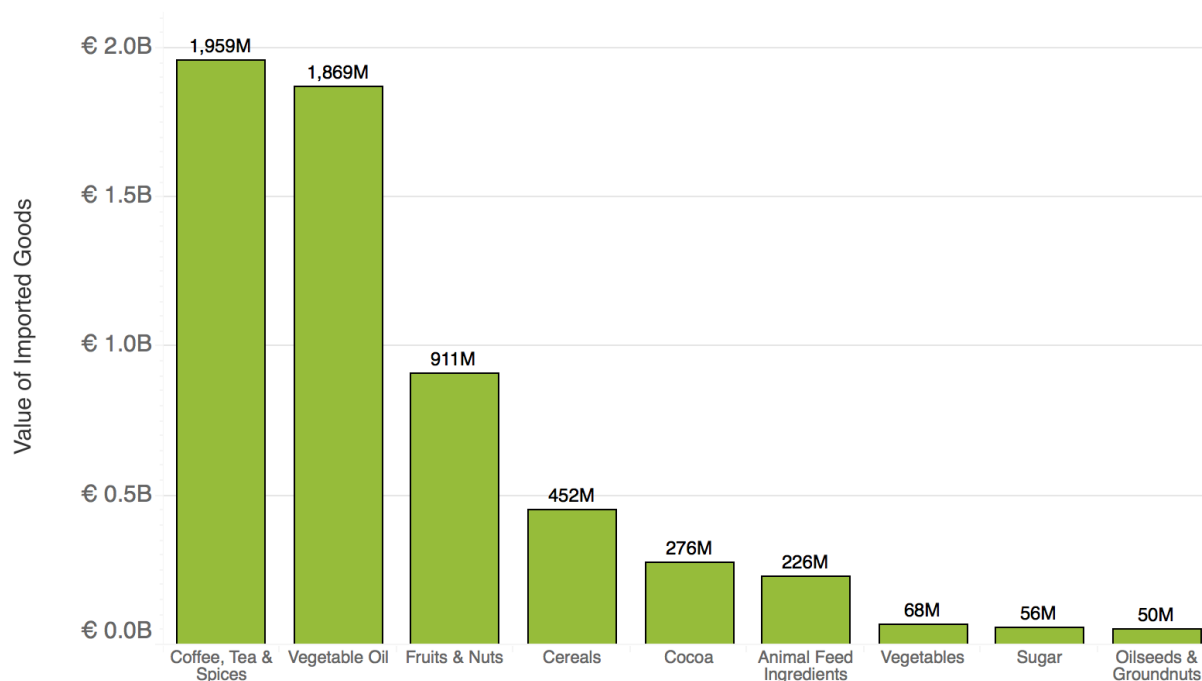
Southeast Asia exported €911 million of fruit and nuts to the EU in 2016. Among those shipments of fruit and nuts, €818 arrived in the form of coconuts, Brazil nuts, and cashews. Vietnam was the largest exporter of coconuts, Brazil nuts, and cashews to the EU, exporting €656.

Shipments of vegetable oils from Southeast Asia to the EU had a total value of € 1.9 billion in 2016. Palm oil shipments make up the majority of the region's vegetable oil exports to the EU. Indonesia and Malaysia were the region's two largest palm oil suppliers, providing €785 million and €470 million, respectively. The Philippines also made a significant contribution to the region's total shipments of vegetable oil to the EU in the form of coconut oil, shipping €450 million in 2016.

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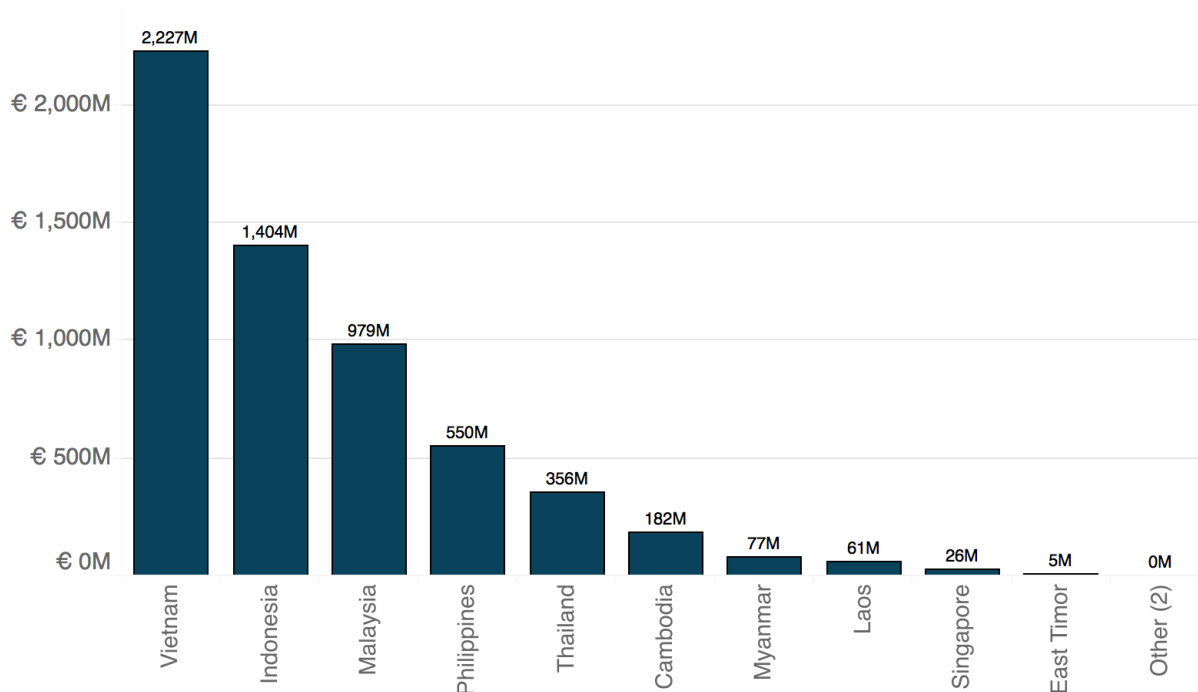
<sup>7</sup> All trade data sourced from the Eurostat Comext database, October 2017.

## Major Affected Commodity Groups: Southeast Asia

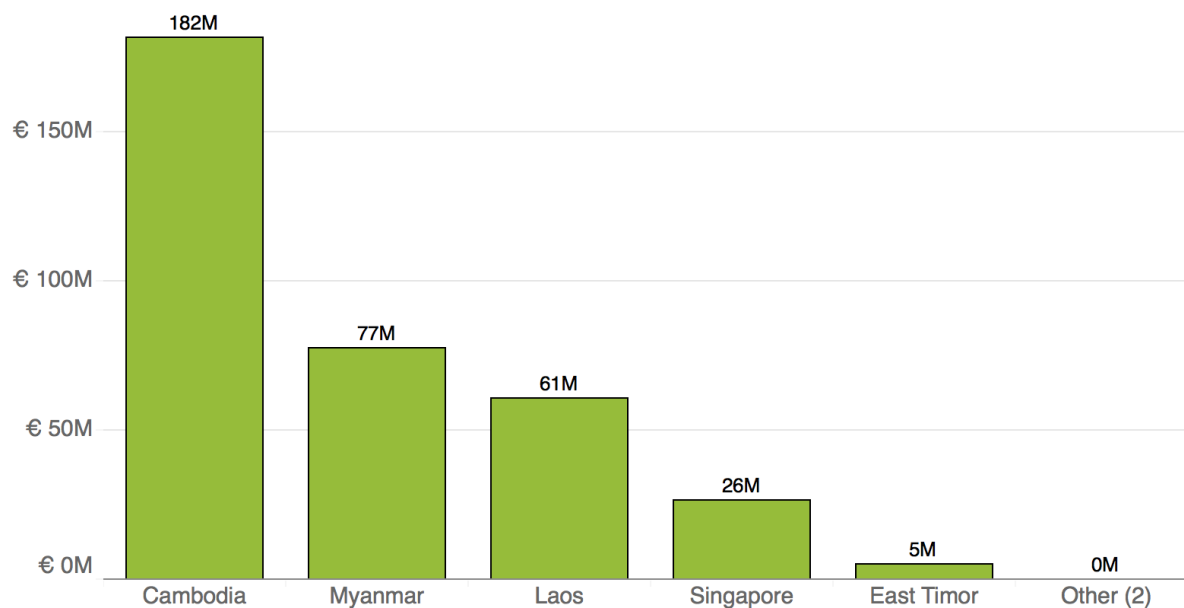


Product Group	EU Imports from Southeast Asia	EU Imports from World	Percent of World Total
Coffee, Tea and Spices	1,958,840,713	9,189,606,288	21.3%
Vegetable Oil	1,869,085,118	5,250,539,259	35.6%
Fruits and Nuts	910,606,279	19,642,346,515	4.6%
Cereals	451,656,530	4,636,635,964	9.7%
Cocoa	276,448,105	6,821,234,038	4.1%
Animal Feed Ingredients	226,020,834	7,938,742,228	2.8%
Vegetables	68,467,590	4,637,451,203	1.5%
Sugar	55,884,941	1,640,912,537	3.4%
Oilseeds and Groundnuts	49,573,484	9,973,475,461	0.5%
<b>Grand Total</b>	<b>€ 5,866,583,594</b>	<b>€ 69,730,943,493</b>	<b>8.4%</b>

## Potential Trade Effects by Country: Southeast Asia



## Imports from Countries Below Median Regional Value: Southeast Asia



*Note:* For the purpose of establishing a regional median value, BCI eliminated countries for whom the combined total imports to the EU of impacted commodity groups was less than €1 million. In the graph above, Southeast Asian countries with less than €1 million have been consolidated under the category “Other (2).”



# **EU Imports of Relevant Commodities and Three Largest Products by Country** (Totaling €5.483 billion of €5.867 billion in potentially affected commodities)



Partner	Top 3 Product Groups	Value of Top 3
Vietnam	Coffee, Fruits, Cereals	€ 2,194,104,192
Indonesia	Vegetable Oil, Coffee, Cocoa	€ 1,183,098,168
Malaysia	Vegetable Oil, Feed, Cocoa	€ 951,513,768
Philippines	Vegetable Oil, Fruits, Sugar	€ 546,391,279
Thailand	Cereals, Fruits, Vegetables	€ 269,171,277
Cambodia	Cereals, Sugar, Coffee	€ 180,148,888
Myanmar	Cereals, Vegetables, Oilseeds	€ 76,353,873
Laos	Sugar, Coffee, Cereals	€ 54,088,168
Singapore	Coffee, Cocoa, Vegetable Oil	€ 23,309,152
Timor-Leste	Coffee	€ 4,999,245
Brunei	Coffee, Oilseeds, Fruits	€ 51,652

## NON-EU/EFTA EUROPE

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This study does not examine trade flows within the European Union or from the European Free Trade Association (EFTA). Those European countries that are not members of the EU or the EFTA provide the EU with €7.5 billion of commodities that are potentially affected by cut-off criteria under EC Regulation 1107/2009 – 10.8 percent of the global total.<sup>8</sup> These countries include Albania, Andorra, Belarus, Bosnia & Herzegovina, Faroe Islands, Kosovo, Macedonia, Moldova, Montenegro, Serbia, Turkey, and Ukraine.

The graphs below present the 2016 value of EU imports of potentially impacted goods on a country-by-country basis and provide regional totals for major commodity groups. The EU imports large amounts of cereals and vegetable oils from this region.

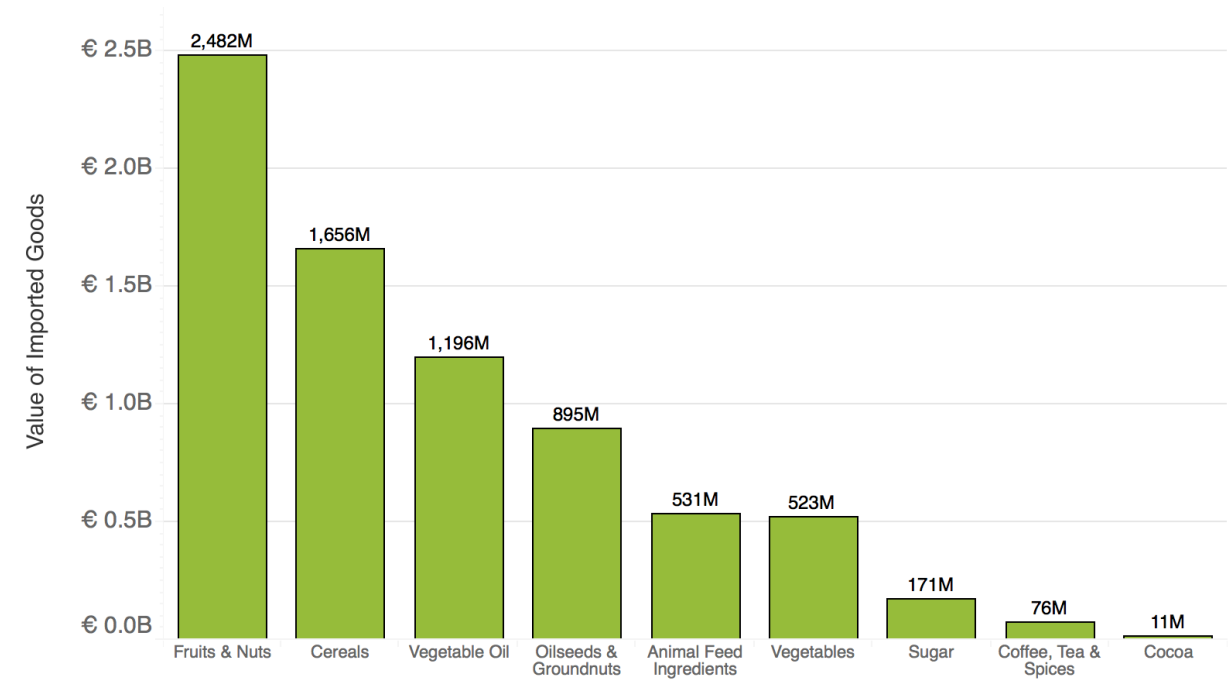
Fruits and nuts are these countries' largest export to the EU among the relevant commodities. Shipments of fruits and nuts from this region to the EU had a total value of €2.5 billion in 2016. Tree nuts are the largest category within fruits and nuts. The region exported €907 million of tree nuts to the EU in 2016. Most of this product came from Turkey, which exported €801 million to the EU. The region supplies 44.8 percent of the world's stone fruit exports to the EU with shipments valued at €178 million. The region supplied the EU with €380 million in grapes, €366 million of which came from Turkey.

Non-EU/EFTA Europe provided €1.2 billion worth of vegetable oil to the EU in 2016 – 22.8 percent of the total imported from the world. That amount is largely drawn from shipments of crude sunflower seed oil from Ukraine which provided the EU with €989 of the commodity. Ukraine provided 97.7 percent of all shipments of crude sunflower oil to the EU from the world in 2016.

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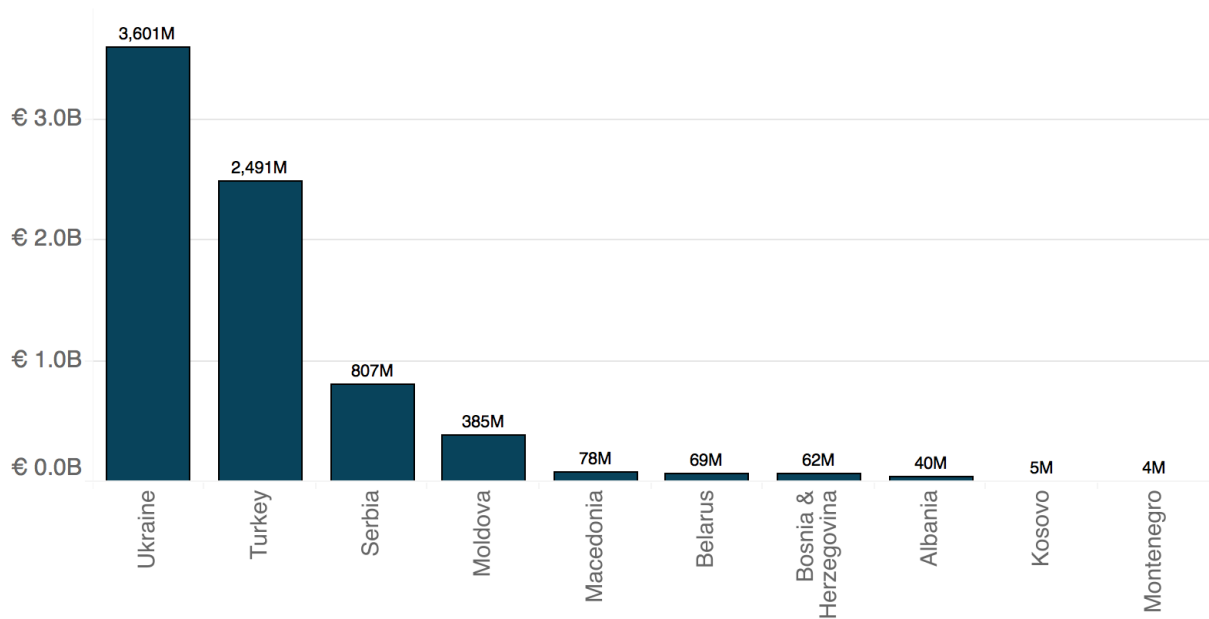
<sup>8</sup> All trade data sourced from the Eurostat Comext database, October 2017.

Major Affected Commodity Groups: Europe (Non-E.U./EFTA)

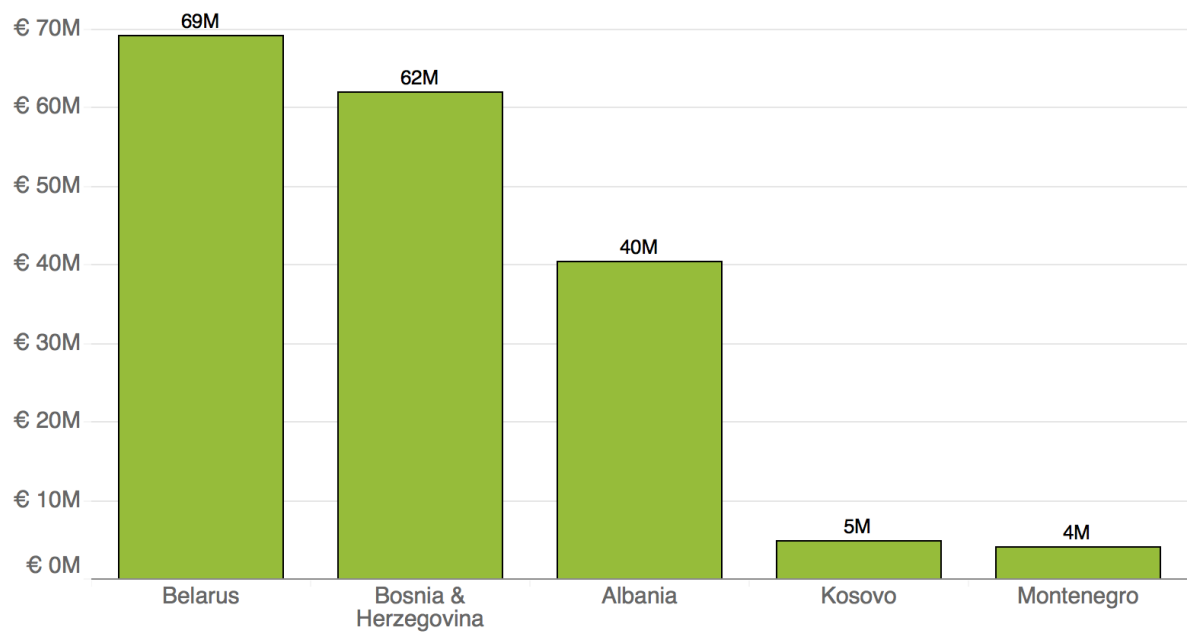


Product Group	EU Imports from Europe (Non-EU/EFTA)	EU Imports from World	Percent of World Total
Fruits and Nuts	2,482,333,812	19,642,346,515	12.6%
Cereals	1,656,184,411	4,636,635,964	35.7%
Vegetable Oil	1,196,454,825	5,250,539,259	22.8%
Oilseeds and Groundnuts	894,920,514	9,973,475,461	9.0%
Animal Feed Ingredients	531,021,795	7,938,742,228	6.7%
Vegetables	522,653,412	4,637,451,203	11.3%
Sugar	170,978,814	1,640,912,537	10.4%
Coffee, Tea and Spices	75,641,507	9,189,606,288	0.8%
Cocoa	11,196,215	6,821,234,038	0.2%
Grand Total	€ 7,541,385,305	€ 69,730,943,493	10.8%

Potential Trade Effects by Country: Europe (Non-E.U./EFTA)



Imports from Countries Below Median Regional Value: Europe (Non-E.U./EFTA)



# **EU Imports of Relevant Commodities and Three Largest Products by Country** (Totaling €6.405 billion of €7.541 billion in potentially affected commodities)



Partner	Top 3 Product Groups	Value of Top 3
Ukraine	Cereals, Veg. Oil, Oilseeds	€ 2,987,543,230
Turkey	Fruits, Vegetables, Oilseeds	€ 2,357,099,127
Serbia	Fruits, Cereals, Sugar	€ 533,812,395
Moldova	Cereals, Oilseeds, Fruits	€ 299,624,076
Macedonia	Vegetables, Fruits, Oilseeds	€ 75,025,599
Belarus	Vegetables, Fruits, Veg. Oil	€ 53,783,336
Bosnia & Herzegovina	Fruits, Vegetables, Sugar	€ 50,768,849
Albania	Vegetables, Oilseeds, Fruits	€ 38,369,145
Kosovo	Vegetables, Oilseeds, Fruits	€ 4,454,993
Montenegro	Vegetables, Oilseeds, Fruits	€ 4,088,812
Faroe Islands	Oilseeds, Fruits, Feed	€ 134,503
Andorra	Coffee, Vegetable Oil, Fruits	€ 10,373

## EAST AND SOUTH ASIA

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The East and South Asia region supplies the EU with €4.3 billion of commodities that are potentially affected by cut-off criteria under EC Regulation 1107/2009.<sup>9</sup> Within this report, export flows attributed to China are consolidated data reflecting shipments from China and its special administrative regions (Hong Kong and Macau).

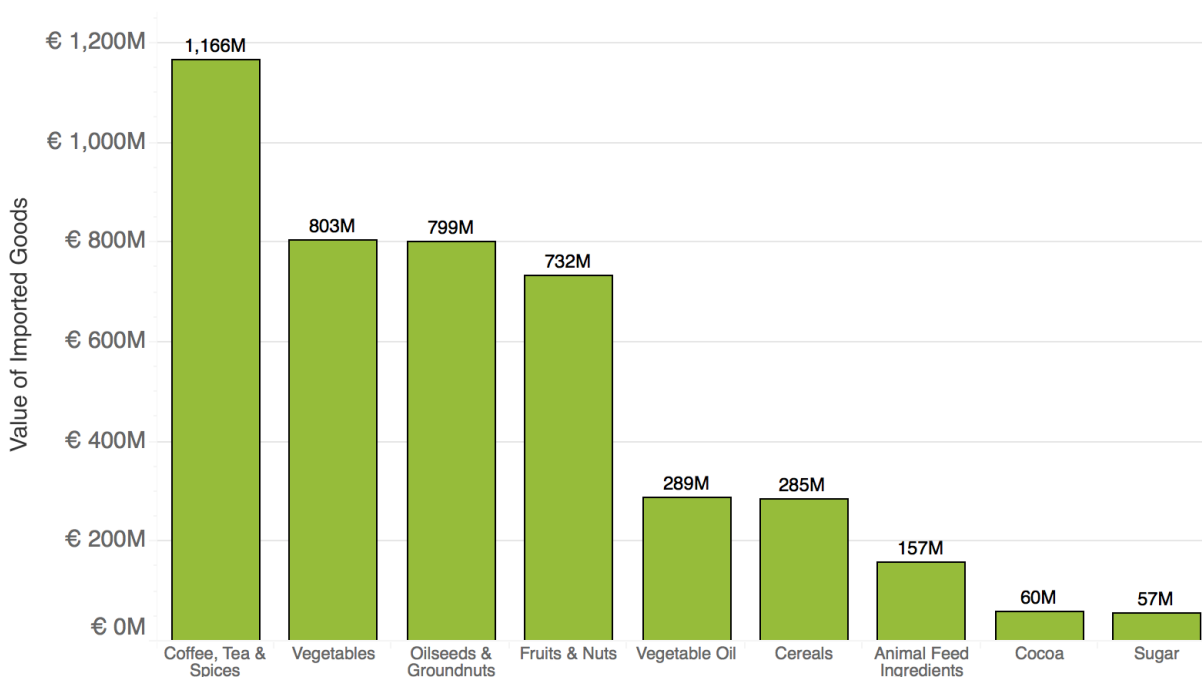
The graphs below present the 2016 value of EU imports of potentially impacted goods on a country-by-country basis and provide regional totals for major commodity groups. EU imports from the region comprise primarily coffee, tea, spices, dried vegetables, and rice.

At a combined value of €1.2 billion, the coffee, tea, and spice category constitutes East and South Asia's largest export to the EU among the relevant commodity groups. Shipments of coffee from this region to the EU had a total value of €393 million in 2016, with most originating from India (€285 million). Shipments of tea accounted for €371 of exports in this category, sourced primarily from India, Sri Lanka, and China. The region exports €403 million in spice to the EU, largely driven by shipments of pepper (€207 million) and ginger (€139 million).

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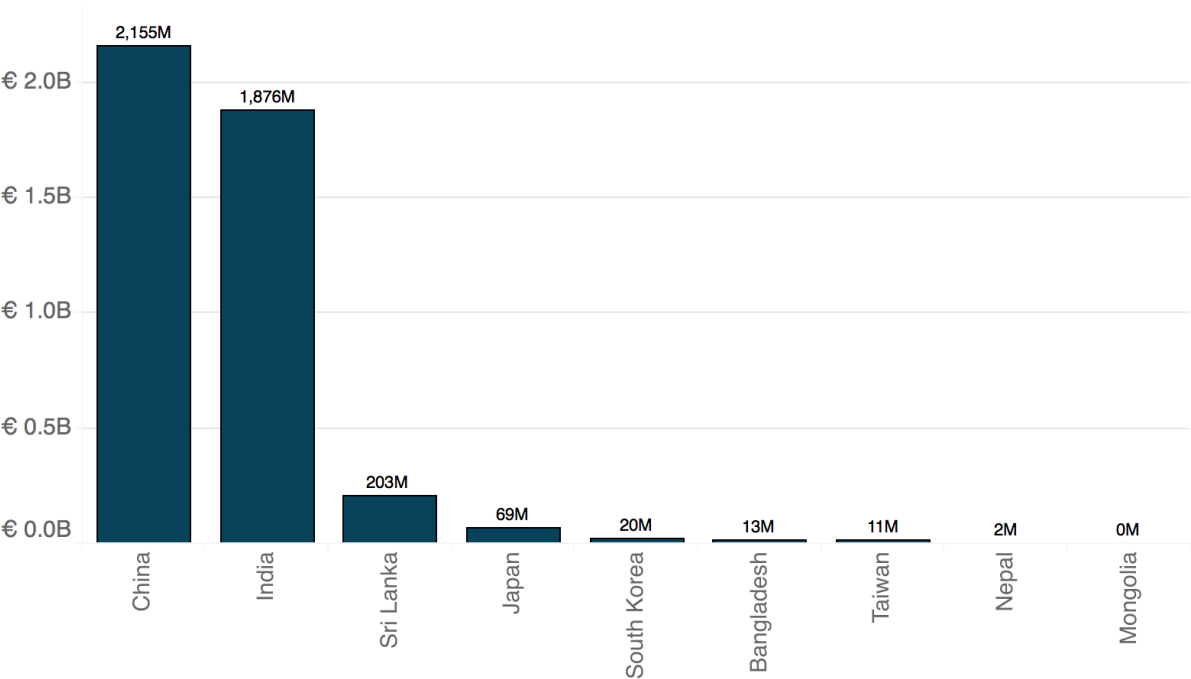
<sup>9</sup> All trade data sourced from the Eurostat Comext database, October 2017.

## Major Affected Commodity Groups: East and South Asia

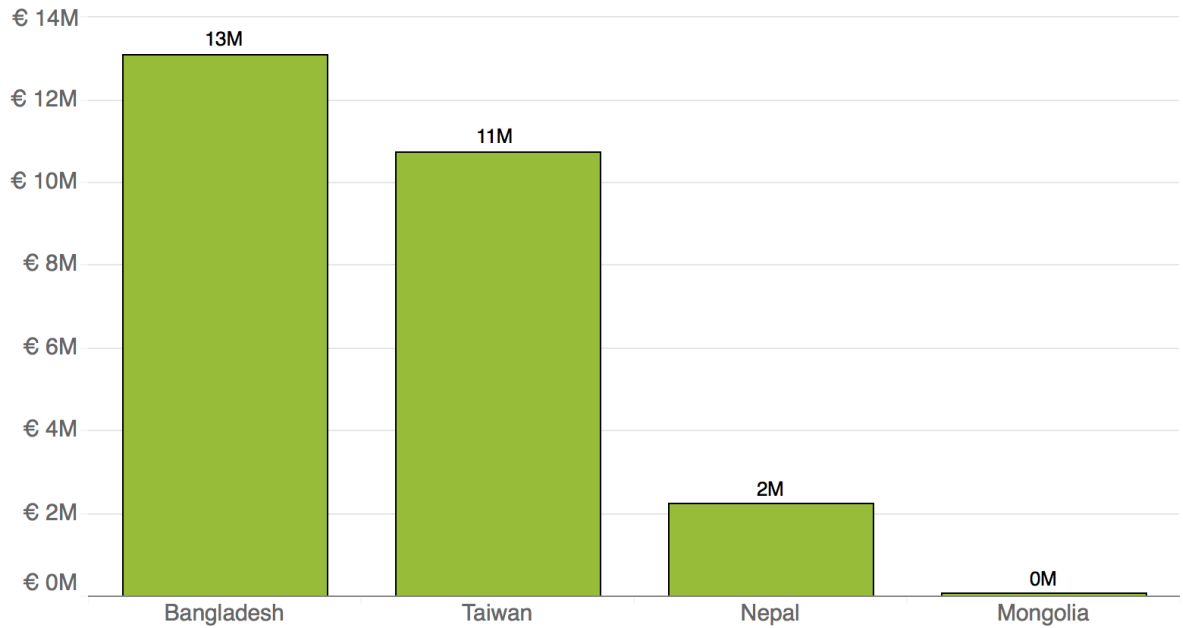


Product Group	EU Imports from East & South Asia	EU Imports from World	Percent of World Total
Coffee, Tea and Spices	1,166,088,625	9,189,606,288	12.7%
Vegetables	803,487,706	4,637,451,203	17.3%
Oilseeds and Groundnuts	799,397,509	9,973,475,461	8.0%
Fruits and Nuts	732,203,008	19,642,346,515	3.7%
Vegetable Oil	288,538,084	5,250,539,259	5.5%
Cereals	285,212,828	4,636,635,964	6.2%
Animal Feed Ingredients	157,139,592	7,938,742,228	2.0%
Cocoa	60,078,913	6,821,234,038	0.9%
Sugar	56,917,556	1,640,912,537	3.5%
<b>Grand Total</b>	<b>€ 4,349,063,821</b>	<b>€ 69,730,943,493</b>	<b>6.2%</b>

Potential Trade Effects by Country: East and South Asia



Imports from Countries Below Median Regional Value: East and South Asia





# **EU Imports of Relevant Commodities and Three Largest Products by Country** (Totaling €3.079 billion of €4.349 billion in potentially affected commodities)



Partner	Top 3 Product Groups	Value of Top 3
China	Vegetables, Oilseeds, Coffee	€ 1,600,214,191
India	Coffee, Fruits, Cereals	€ 1,183,564,672
Sri Lanka	Coffee, Vegetable Oil, Fruits	€ 193,708,064
Japan	Oilseeds, Coffee, Cocoa	€ 62,445,367
South Korea	Vegetables, Oilseeds, Coffee	€ 17,235,675
Bangladesh	Vegetables, Fruits, Cereals	€ 11,975,916
Taiwan	Oilseeds, Coffee, Fruits	€ 8,272,884
Nepal	Coffee, Vegetables, Oilseeds	€ 2,024,409
Mongolia	Oilseeds, Fruits, Coffee	€ 55,574

## NORTH AFRICA AND THE MIDDLE EAST

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The North Africa and Middle East region supplies the EU with €4.3 billion of commodities that are potentially affected by cut-off criteria under EC Regulation 1107/2009.<sup>10</sup> The graphs below present the 2016 value of EU imports of potentially impacted goods on a country-by-country basis and provide regional totals for major commodity groups. EU imports from the region comprise primarily vegetables, fruits, and nuts.

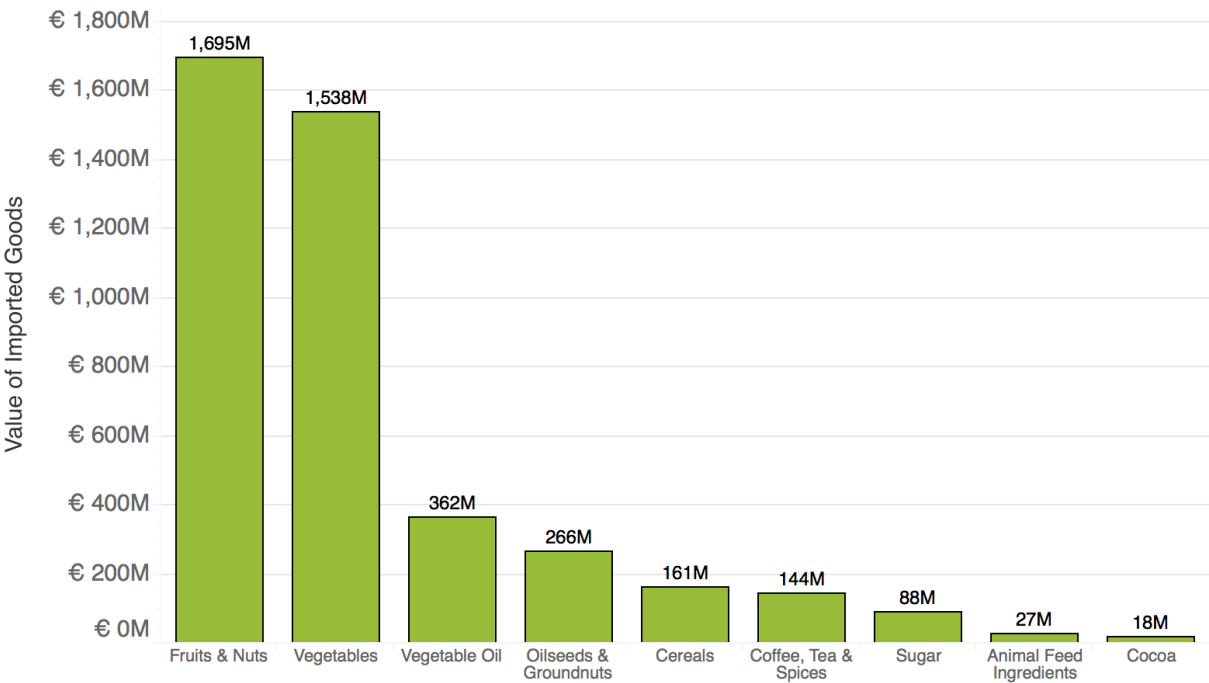
Fruits and nuts are North Africa and the Middle East's largest export to the EU among the relevant commodity groups. Shipments of fruits and nuts from this region to the EU had a total value of €1.7 billion in 2016. The region provided the EU with €413 million in grapes, €124 million of that coming from Egypt. Morocco was the single largest exporter in the fruits and nuts category, shipping €547 million to the EU mostly in the form of fruit such as citrus, strawberries, and melons.

North Africa and the Middle East exported €1.5 billion of vegetables to the EU in 2016. Among those vegetable shipments, €438 million arrived in the form of tomatoes. The tomatoes are exported almost exclusively from Morocco. Morocco is the largest supplier of vegetables to the EU within this region, exporting €961 million in 2016.

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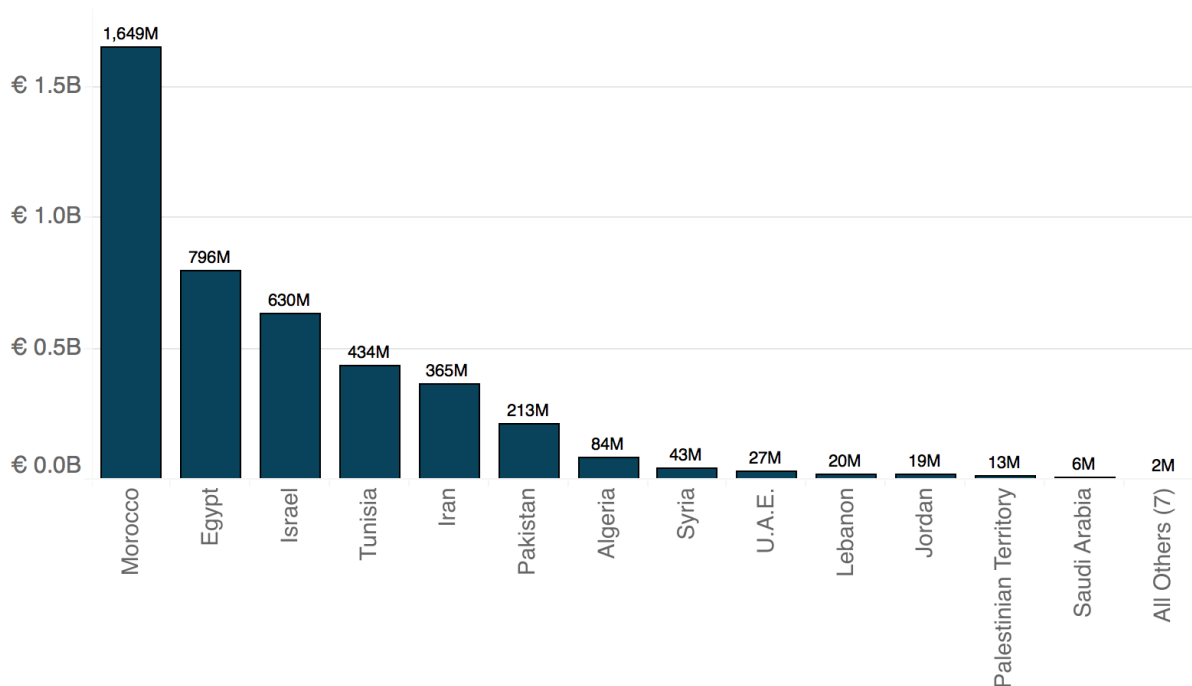
<sup>10</sup> All trade data sourced from the Eurostat Comext database, October 2017.

Major Affected Commodity Groups: North Africa and Middle East

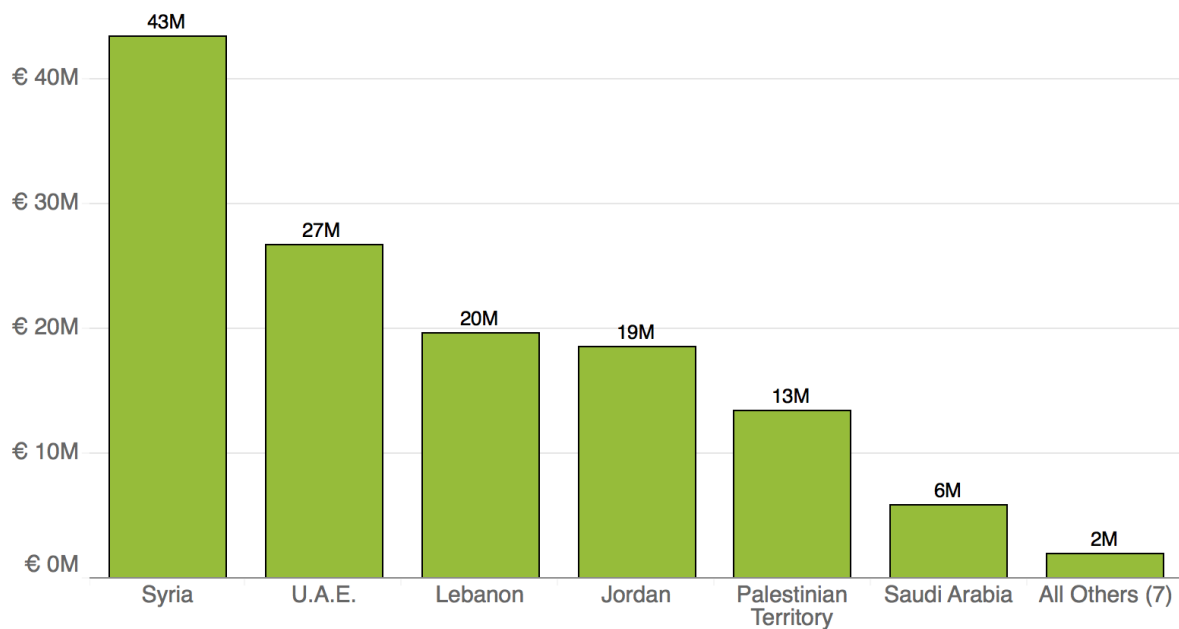


Product Group	EU Imports from East & South Asia	EU Imports from World	Percent of World Total
Fruits and Nuts	1,695,213,720	19,642,346,515	8.6%
Vegetables	1,537,783,219	4,637,451,203	33.2%
Vegetable Oil	362,160,051	5,250,539,259	6.9%
Oilseeds and Groundnuts	265,639,946	9,973,475,461	2.7%
Cereals	160,797,069	4,636,635,964	3.5%
Coffee, Tea and Spices	144,470,378	9,189,606,288	1.6%
Sugar	88,492,815	1,640,912,537	5.4%
Animal Feed Ingredients	27,338,820	7,938,742,228	0.3%
Cocoa	18,266,538	6,821,234,038	0.3%
Grand Total	€ 4,300,162,556	€ 69,730,943,493	6.2%

### Potential Trade Effects by Country: North Africa and Middle East



### Imports from Countries Below Median Regional Value: North Africa and Middle East



*Note:* For the purpose of establishing a regional median value, BCI eliminated countries for whom the combined total imports to the EU of impacted commodity groups was less than €1 million. In the graph above, North African and Middle Eastern countries with less than €1 million have been consolidated under the category “All Others (7).”

## EU Imports of Relevant Commodities and Three Largest Products by Country (Totalling €3.079 billion of €4.300 billion in potentially affected commodities)



Partner	Top 3 Product Groups	Value of Top 3
Morocco	Vegetables, Fruits, Oilseeds	€ 1,573,270,461
Egypt	Fruits, Vegetables, Oilseeds	€ 711,641,610
Israel	Fruits, Vegetables, Oilseeds	€ 616,409,833
Tunisia	Veg. Oil, Fruits, Vegetables	€ 421,892,908
Iran	Fruits, Coffee, Cocoa	€ 358,655,550
Pakistan	Cereals, Fruits, Vegetables	€ 189,017,756
Algeria	Sugar, Fruits, Cocoa	€ 78,468,784
Syria	Vegetable Oil, Coffee, Fruits	€ 37,387,833
United Arab Emirates	Coffee, Sugar, Fruits	€ 21,174,500
Jordan	Vegetables, Fruits, Coffee	€ 17,646,825
Lebanon	Coffee, Oilseeds, Fruits	€ 15,634,903
Palestinian Territories	Fruits, Veg. Oil, Oilseeds	€ 12,373,880
Saudi Arabia	Fruits, Sugar, Vegetable Oil	€ 5,443,544
Oman	Fruits, Veg. Oil, Vegetables	€ 664,226
Yemen	Coffee, Sugar, Oilseeds	€ 487,437
Iraq	Fruits, Cereals, Oilseeds	€ 371,627
Libya	Cereals, Fruits, Feed	€ 323,685
Qatar	Veg. Oil, Coffee, Oilseeds	€ 63,718
Kuwait	Coffee, Fruits, Cereals	€ 45,818
Bahrain	Fruits, Coffee	€ 8,565

## OCEANIA

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Oceania supplies the EU with €1.9 billion of commodities that are potentially affected by cut-off criteria under EC Regulation 1107/2009.<sup>11</sup> The graphs below present the 2016 value of EU imports of potentially impacted goods on a country-by-country basis and provide regional totals for major commodity groups. EU imports from the region are heavy in oilseeds, oils, fruits, and nuts.

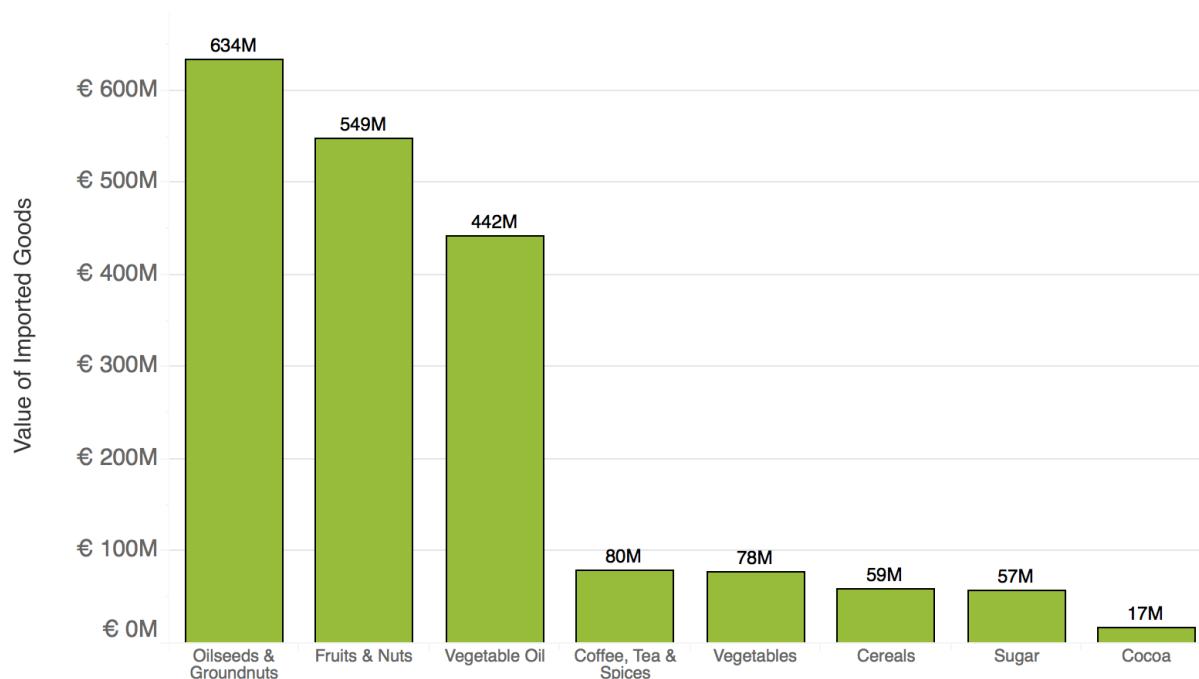
Oilseeds are Oceania's largest export to the EU among the relevant commodities. In 2016, Oceania shipped €634 million to the EU within the oilseed and groundnut category, most in the form of €518 million in rapeseed from Australia. The region also exports significant values of vegetable oil to the EU. In 2016, Oceania exported €412 million in palm oil, mostly from Papua New Guinea.

Shipments of fruits and nuts from Oceania to the EU had a total value of €549 billion in 2016. Significant export flows to the EU in this category include strawberries from New Zealand (€218 million), apples/pears from New Zealand (€150 million), and nuts from Australia (€154 million).

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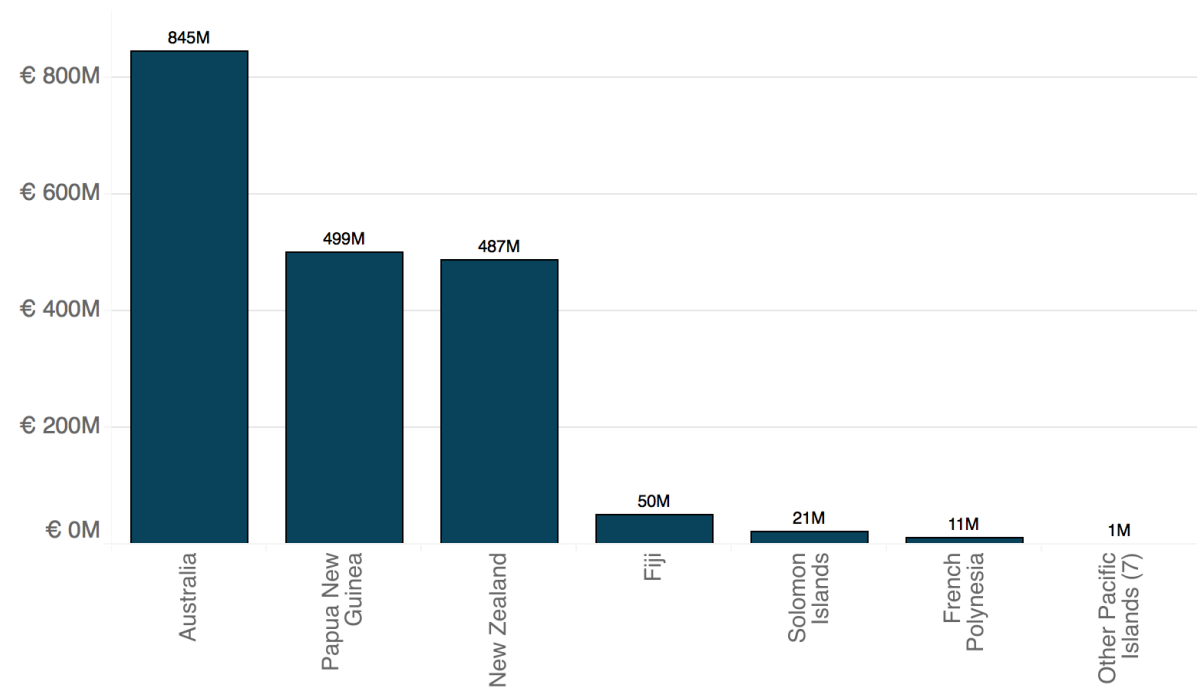
<sup>11</sup> All trade data sourced from the Eurostat Comext database, October 2017.

## Major Affected Commodity Groups: Oceania

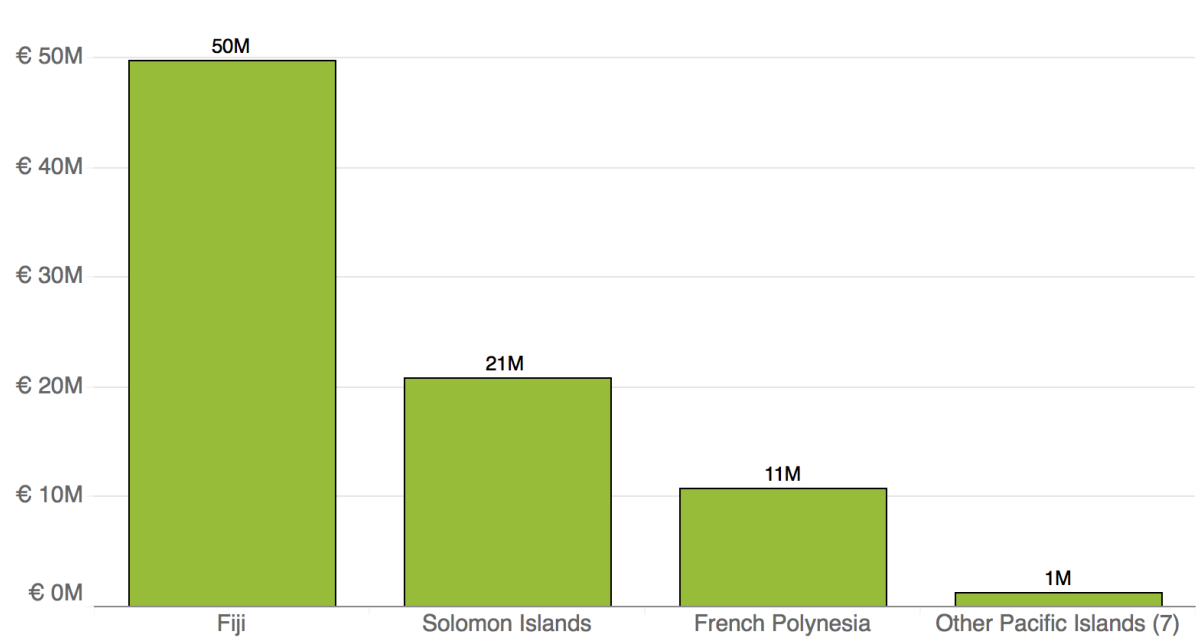


Product Group	EU Imports from East & South Asia	EU Imports from World	Percent of World Total
Oilseeds and Groundnuts	633,719,077	9,973,475,461	6.4%
Fruits and Nuts	548,601,294	19,642,346,515	2.8%
Vegetable Oil	441,529,451	5,250,539,259	8.4%
Coffee, Tea and Spices	79,597,651	9,189,606,288	0.9%
Vegetables	77,957,602	4,637,451,203	1.7%
Cereals	58,949,028	4,636,635,964	1.3%
Sugar	57,099,656	1,640,912,537	3.5%
Cocoa	16,944,655	6,821,234,038	0.2%
Animal Feed Ingredients	35,989	7,938,742,228	0.0%
<b>Grand Total</b>	<b>€ 1,914,434,403</b>	<b>€ 69,730,943,493</b>	<b>2.7%</b>

Potential Trade Effects by Country: Oceania



Imports from Countries Below Median Regional Value: Oceania



*Note:* For the purpose of establishing a regional median value, BCI eliminated countries for whom the combined total imports to the EU of impacted commodity groups was less than €1 million. In the graph above, Oceanic countries with less than €1 million have been consolidated under the category “Other Pacific Islands (7).”



# **EU Imports of Relevant Commodities and Three Largest Products by Country** (totaling €1.831 billion of €1.914 billion in potentially affected commodities)



Partner	Top 3 Product Groups	Value of Top 3
Australia	Oilseeds, Fruits, Cereals	€ 797,439,972
Papua New Guinea	Oils, Coffee, Cocoa	€ 498,911,617
New Zealand	Fruits, Oilseeds, Vegetables	€ 472,873,598
Fiji	Sugar, Oilseeds, Coffee	€ 49,773,077
French Polynesia	Oils, Coffee, Sugar	€ 10,738,581
New Caledonia	Cocoa, Coffee, Oilseeds	€ 701,640
Vanuatu	Oilseeds, Oils, Cocoa	€ 385,462
Solomon Islands	Cocoa, Oilseeds, Oils	€ 248,622
Heard Island & McDonald Islands	Coffee, Feed, Cereals	€ 109,804
Niue	Oilseeds, Feed, Cereals	€ 15,381
Marshall Islands	Vegetables	€ 5,200
Tokelau	Oilseeds	€ 1,301

## CENTRAL ASIA

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Central Asia supplies the EU with €1.4 billion of commodities that are potentially affected by cut-off criteria under EC Regulation 1107/2009.<sup>12</sup> The graphs below present the 2016 value of EU imports of potentially impacted goods on a country-by-country basis and provide regional totals for major commodity groups. Within Central Asia, Russia is by far the EU's largest trading partner. Russia alone provides 75 percent of the region's exports to the EU within the relevant commodity groups. EU imports from the region are primarily cereals and animal feed.

Among the relevant commodity groups, cereals are Central Asia's largest export to the EU. The region shipped €381 million to the EU in 2016. Most of the region's cereal exports come from Russia, which supplied the EU with €214 million in corn and €112 million in wheat during 2016. Kazakhstan also contributed to the region's EU-bound cereal shipments, with €43 million.

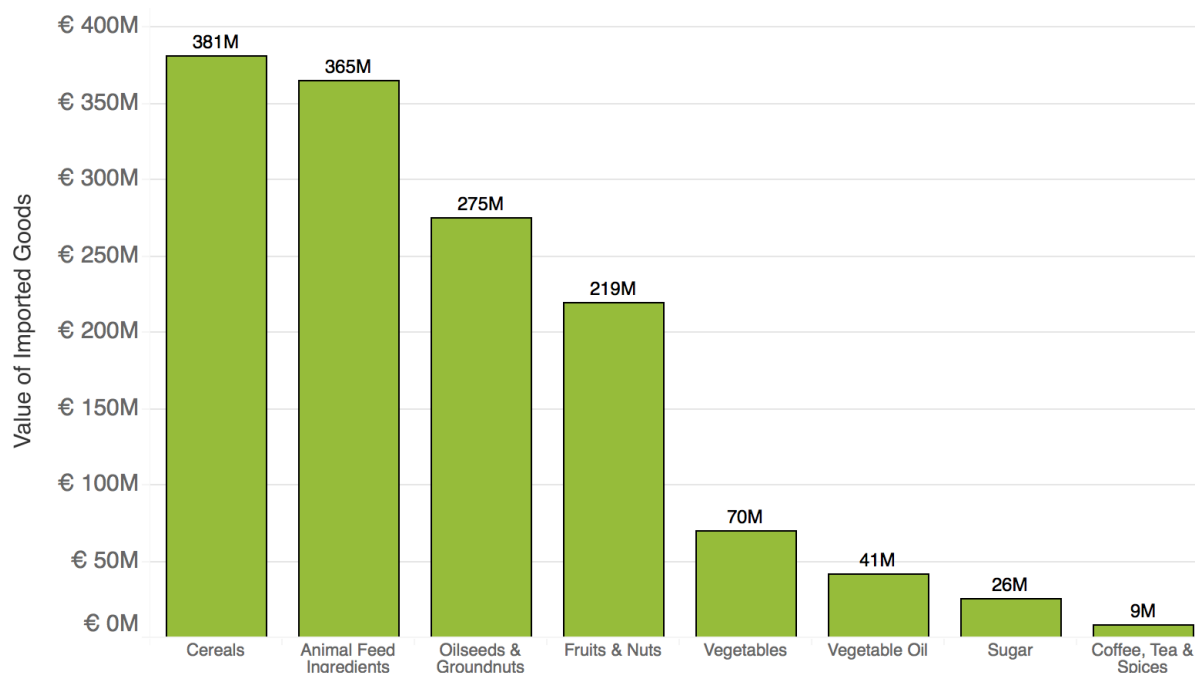
Animal feed ingredients are Central Asia's second largest export to the EU among the relevant commodity groups. The region shipped €365 million to the EU in 2016. These exports come almost exclusively from Russia. Most animal feed shipments are derived from oilseeds, a separate commodity group that Central Asia ships to the EU in significant quantities. In 2016, the region shipped €275 million in oilseeds to the EU. Flaxseed is the single largest component of Central Asia's shipments to the EU within the oilseed category. The region supplied the EU with €187 million in flaxseed during 2016, originating in Russia (€120 million) and Kazakhstan (€ 67 million).

Shipments of fruits and nuts from Central Asia to the EU had a total value of €219 billion in 2016. Significant export flows to the EU in this category include nuts from Georgia (€127 million) and Azerbaijan (€54 million), grapes from Uzbekistan (€13 million), and frozen fruit from Russia (€10 million).

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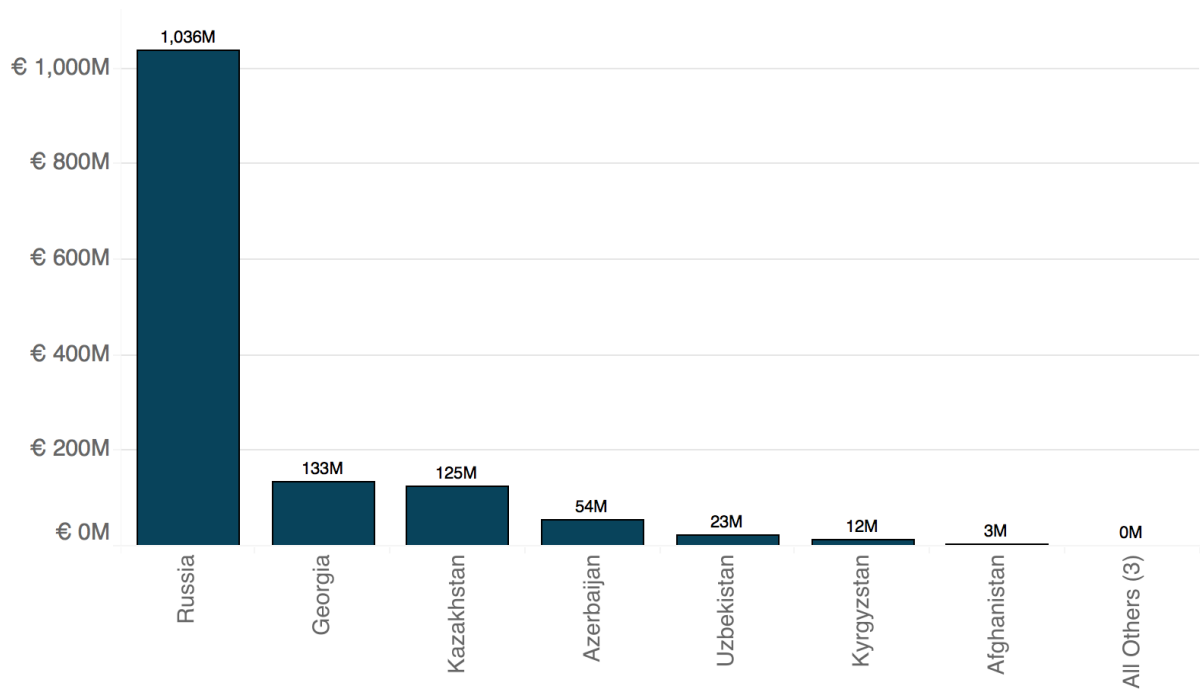
<sup>12</sup> All trade data sourced from the Eurostat Comext database, October 2017.

## Major Affected Commodity Groups: Central Asia

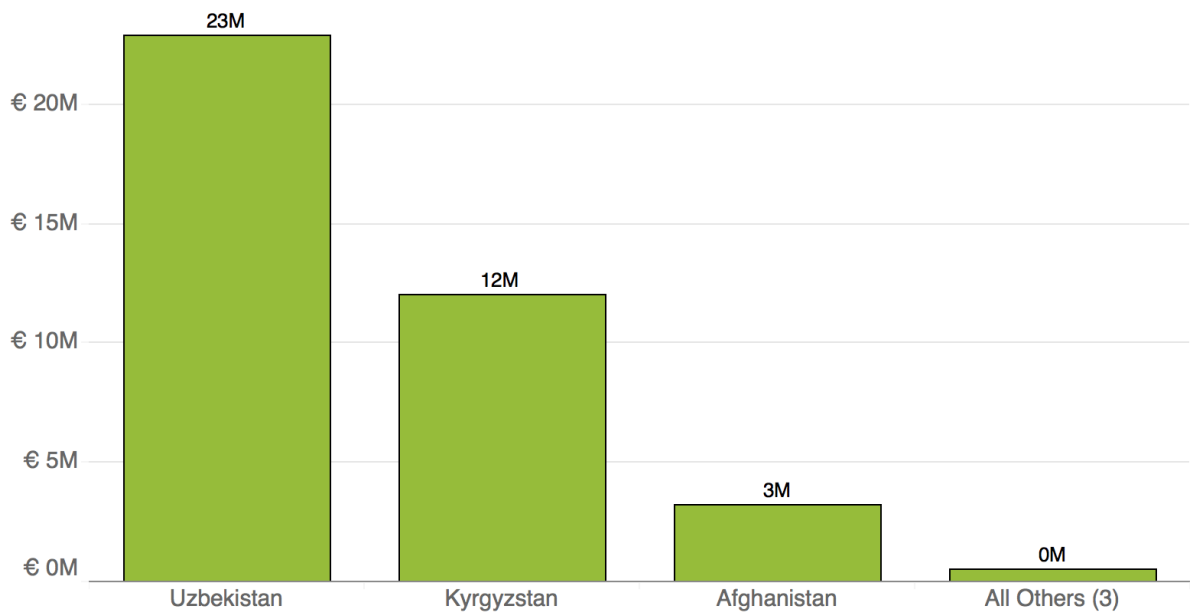


Product Group	EU Imports from East & South Asia	EU Imports from World	Percent of World Total
Cereals	381,341,752	4,636,635,964	8.2%
Animal Feed Ingredients	365,245,597	7,938,742,228	4.6%
Oilseeds and Groundnuts	274,943,903	9,973,475,461	2.8%
Fruits and Nuts	219,289,825	19,642,346,515	1.1%
Vegetables	70,236,893	4,637,451,203	1.5%
Vegetable Oil	41,206,542	5,250,539,259	0.8%
Sugar	25,609,446	1,640,912,537	1.6%
Coffee, Tea and Spices	8,593,916	9,189,606,288	0.1%
Cocoa	2,965	6,821,234,038	0.0%
<b>Grand Total</b>	<b>€ 1,386,470,839</b>	<b>€ 69,730,943,493</b>	<b>2.0%</b>

Potential Trade Effects by Country: Central Asia



Imports from Countries Below Median Regional Value: Central Asia



*Note:* For the purpose of establishing a regional median value, BCI eliminated countries for whom the combined total imports to the EU of impacted commodity groups was less than €1 million. In the graph above, Central Asian countries with less than €1 million have been consolidated under the category “All Others (3).”

# **EU Imports of Relevant Commodities and Three Largest Products by Country** (totaling €1.241 billion of €1.386 billion in potentially affected commodities)



Partner	Top 3 Product Groups	Value of Top 3
Russia	Feed, Cereals, Oilseeds	€ 894,507,344
Georgia	Fruits, Vegetable Oil, Oilseeds	€ 131,602,032
Kazakhstan	Oilseeds, Cereals, Vegetables	€ 122,775,209
Azerbaijan	Fruits, Oilseeds, Coffee	€ 54,104,890
Uzbekistan	Fruits, Oilseeds, Vegetables	€ 22,028,125
Kyrgyzstan	Vegetables, Fruits, Oilseeds	€ 12,034,413
Afghanistan	Fruits, Vegetables, Oilseeds	€ 3,074,303
Tajikistan	Oilseeds, Fruits	€ 445,116
Armenia	Fruits, Cereals, Vegetable Oil	€ 20,545
Turkmenistan	Fruits, Vegetables, Feed	€ 10,796

## METHODOLOGY, ASSUMPTIONS & LIMITATIONS

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Drawing upon the European Commission's impact assessment on the endocrine disruption criteria as well as the current classifications of substances under the EU Classification, Labelling and Packaging (CLP) Regulation, and recently proposed classifications by the European Food Safety Authority (EFSA) and European Chemicals Agency (ECHA), a list of 58 active substances has been identified that could be assessed as being impacted by the hazard-based properties included in Regulation 1107/2009. The list developed by ECPA, included as Appendix A, served as the list of relevant active substances for the BCI study. Appendix A also provides the expiry date of EU approval for each substance, suggesting the time frame within which it will be assessed against the cut-off criteria.

Because there is no readily available data regarding the use of specific active substances for protection of specific crops in specific countries, and research on actual usage is beyond the scope of this study, the existence of an MRL in a trading partner was used as a proxy for accepted use of the active substance for production of a commodity in that country.

The Global MRL database maintained by Bryant Christie Inc. was used to identify current MRLs established for markets around the globe, including the EU, for the 58 selected substances. Pivot tables were then generated to conduct a commodity-specific analysis of EU MRLs and corresponding MRLs in exporting markets. Data was eliminated where MRLs were already at the default level of 0.01 ppm (such as for those substances for which the EU approval has already been allowed to expire; see Appendix A). This produced a list of commodities in each exporting market that would need to comply with a more restrictive EU default MRL. The list of relevant commodities was further refined by removing products of animal origin, products for industrial or technical uses unrelated to food production, and processed products.

Because commodities to which MRLs apply are identified by their commodity code, whereas trade flow data identifies commodities by their Harmonized System (HS) code, it was necessary to crosswalk the commodities to appropriate HS codes. This process resulted in a list of products that are included in the following nine 2-digit HS chapters:

- 07 – Edible vegetables and certain roots and tubers
- 08 – Edible fruit and nuts; peel of citrus fruit or melons
- 09 – Coffee, tea, maté and spices
- 10 – Cereals
- 12 – Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder
- 15 – Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes
- 17 – Sugars and sugar confectionery
- 18 – Cocoa and cocoa preparations
- 23 – Residues and waste from the food industries; prepared animal fodder

Within these chapters, a number of additional 4-digit, 6-digit, and 8-digit sub-classifications were removed because they could confidently be deemed irrelevant to the study. These included inedible, industrial, animal-derived products. Also excluded where possible are highly processed products, for which the effect of changes in MRLs will be modified by the application of (yet unpublished)

“concentration or dilution factors.”<sup>13</sup> Appendix B, included in Part 2 of this report provides a list of the 82 four-digit HS classifications that were included, and included sub-classifications in cases where some sub-classifications were excluded.

For each of the relevant HS classifications, data was extracted from the Eurostat Comext database, capturing imports into the EU from all world export sources for the 2016 calendar year, denominated in 2016 Euros. All countries with trade flows in the relevant commodities were included, numbering 179. European Free Trade Association (EFTA) countries<sup>14</sup> were not considered as exporters to the EU. The European Commission recognizes dozens of self-governing Overseas Countries and Territories (OCTs) with have special links with Member States Denmark, France, the Netherlands, or the United Kingdom. These countries have been included as exporters in the analysis, as research indicates that their MRLs are not fully harmonized with the EU-28/EFTA.

Trade data was analyzed by country and region of origin. To provide some context for the magnitude of potentially affected trade, total agricultural imports into the EU were estimated by summing the 2016 values of imports within HS Chapters 01-20 and 23.

Part 1 of this report presents the global results of the analysis and results for the following nine regions:

- Central & South America
- Europe (Non-EU/EFTA)
- Oceania
- Central Asia
- North Africa & Middle East
- Southeast Asia
- East & South Asia
- North America & Caribbean
- Sub-Saharan Africa

For each region, it provides the 2016 value of relevant EU imports by product group and country, and identifies the top three relevant export commodities for each country.

Part 2 contains brief reports for each of the 50 top exporting countries for potentially impacted commodities, by value. Together these countries accounted for 95.7 percent of all EU imports of the potentially impacted product groups in 2016.<sup>15</sup>

#### Limitations of the study.

The exclusion of processed products from this analysis likely causes a degree of under-estimation in the study, as some processed products of affected commodities can also be expected to be affected. Conversely, the analysis likely over-estimates the affected trade flows due to three factors.

Firstly, even at the 8-digit level of specification, HS classifications often include both relevant and nonrelevant commodities that cannot be further parsed. Thus, within the estimated trade flows that are included there are certainly some products that would not be affected. While the use of Global MRL provided a much more refined understanding of the potential regulatory alignment under

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<sup>13</sup> See European Union: Health & Food Safety Directorate General, *Guidance Document on MRL setting procedure in accordance with Articles 6 to 11 of Regulation (EC) No 396/2005 and Article 8 of Regulation (EC) No 1107/2009*, 23 September 2016, SANTE/2015/10595 Rev. 4, available at [https://ec.europa.eu/food/sites/food/files/plant/docs/pesticides\\_mrl\\_guidelines\\_mrl-setting-proc.pdf](https://ec.europa.eu/food/sites/food/files/plant/docs/pesticides_mrl_guidelines_mrl-setting-proc.pdf). [Accessed 8 October 2017]

<sup>14</sup> EFTA member states are Iceland, Liechtenstein, Norway, and Switzerland.

<sup>15</sup> The fifty countries have combined exports to the EU of €66,714,029,351 of potentially affected commodities; world total exports to the EU of potentially affected commodities are €69,730,943,493.

proposed EU regulations, it was not possible to maintain this refinement when the potentially affected commodities were cross-walked to HS codes.

Secondly, the existence of an MRL in the exporting country is a best-available, but imprecise, proxy for the actual use of an active substance in crop protection. To the degree that the active substance is not commonly used, some commodities included in this estimation may not, in fact, be at risk from the loss of the EU MRLs.

Finally, it is also beyond the scope of this study to assess the possibility that, in response to a change in EU regulations, agricultural producers in exporting countries can and will switch to alternative crop protection products, thus reducing the impact on trade flows. The reader is asked to bear in mind the limitations of the study when using the resulting estimations.



## APPENDIX: RELEVANT ACTIVE SUBSTANCES

For the purposes of this study, the 58 active substances listed below were considered to be those that could be affected by a hazard assessment. This list was developed by the European Crop Protection Association, with data drawn from:

- European Commission's impact assessment on the endocrine disruption criteria
- Current classifications of substances under the EU Classification, Labelling and Packaging (CLP) Regulation
- Recently proposed classifications by the European Food Safety Authority (EFSA) and European Chemicals Agency (ECHA)

This list does not constitute a final evaluation of individual substances under the Plant Protection Products Regulation 1107/2009 and does not prejudice any future decisions on these active substances.

Active Substance	Approval Expiry Date
2,4-D	31-12-2030
2-Phenylphenol (incl. sodium salt orthophenylphenol)	31-12-2021
8-Hydroxyquinoline incl. oxyquinoline	31-12-2021
Acetochlor	No longer EU approved
Amitrole	No longer EU approved
Boscalid	31-07-2018
Brodifacoum	No longer EU approved
Bromadiolone	31-05-2021
Carbendazim	No longer EU approved
Carbetamide	31-05-2021
Chlorophacinone	No longer EU approved
Cyanamide	No longer EU approved
Cypermethrin	31-10-2017
Cyproconazole	31-05-2021
Desmedipham	31-07-2018
Difenacoum	31-12-2019
Difethialon	No longer EU approved
Epoxiconazole	30-04-2019
Fenamidone	31-07-2018
Flocoumafen	No longer EU approved
Flubendiamide	31-08-2024
Flumioxazin	30-06-2018
Flupyrifluron-methyl	30-06-2018
Flurochloridone	31-05-2021
Flusilazole	No longer EU approved
Flutolanil	28-02-2019
Folpet	31-07-2018
Glufosinate	31-07-2018
Iprodione	31-10-2017

Active Substance	Approval Expiry Date
Isoxaflutole	31-07-2018
Lenacil	31-12-2018
Linuron	No longer EU approved
Malathion	30-04-2020
Mancozeb	30-01-2018
Maneb	No longer EU approved
Metalaxyl	30-06-2020
Metiram	31-01-2018
Myclobutanil	31-05-2021
Oxadiazon	31-12-2018
Pendimethalin	31-08-2024
Prochloraz	31-12-2021
Propiconazole	31-01-2018
Propyzamide	31-01-2018
Pymetrozine	30-06-2018
Pyriproxyfen	31-12-2018
Quizalafop-p-terfuryl	30-11-2009
Spirodiclofen	30-07-2020
Tebuconazole	31-08-2019
Tepraloxydim	No longer EU approved
Tetraconazole	31-12-2021
Thiacloprid	30-04-2018
Thiophanate-methyl	31-10-2017
Thiram	30-04-2018
Tralkoxydim	30-04-2019
Triadimenol	31-08-2019
Triflumizole	30-06-2020
Triflurosulfuron	31-12-2019
Warfarin	No longer EU approved
Ziram	30-04-2018

Source: European Crop Protection Association