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**THE ANALYSIS OF COLOMBIAN FRUITS:  
CASE STUDY OF TRADE WITH THE  
EUROPEAN UNION**

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## **DECLARATION**

I hereby declare that I have written this diploma thesis "The Analysis of Colombian fruits: Case study of trade with the European Union" by myself with the help of the literature listed in the references.

Praha 6- Suchdol, 15 March 2016

Malkah Restrepo Herrera

## **ACKNOWLEDGEMENT**

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## SUMMARY

Colombia is one of the most diverse countries in the world with a variety of climate zones and ecosystems which allows the production of more than 95 different types of fruits. That is why, the government of Colombia has signed the free trade agreement with the European Union that came into force in 2013, to open international markets for exports. Due to the free trade agreement came into force recently, this research is considered innovative to develop.

**The diploma thesis** is the trade analysis of 5 Colombian fruits (Golden berry, Purple passion fruit, Avocado Hass, Tahiti Lime and Melon), focused on a case study of trade with the European Union, comprising the period of 2012-2015. The information gathered is from SICEX database.

The core content of the diploma thesis is affirming or denying the following research questions:

Did the free trade agreement between Colombia and the European Union increase the exports of fruits?

Are there more opportunities to grow the fruit exports with the European Union?

**Key terms:** Colombian fruits, Colombia, Colombian trade, Europe imports.

## SOUHRN

Kolumbie je jedna z nejrozmanitějších zemí na světě s mnoha typy podnebných pásů a ekosystémů, které umožňují produkci více než 95 různých druhů ovoce. To je i důvodem, proč Kolumbijská vláda podepsala dohodu o volném obchodu s Evropskou Unií, která nabral účinnosti v roce 2013, kdy se otevřel mezinárodní trh pro vývoz. Vzhledem k těmto nedávným událostem je výzkum považován za rozvojový. Diplomová práce se zabývá obchodní analýzou 5 druhů kolumbijského ovoce (mochyně, marakuja, avokáda Hass, Tahitská limeta a meloun), a je pojata jako případová studie obchodu s Evropskou Unií, porovnávací období od roku 2013 do roku 2015. Informace jsou získány z databáze SICEX.

Nejdůležitějším obsahem diplomové práce je potvrzení či zamítnutí následující výzkumné otázky:

Zvýšila dohoda o volném obchodu mezi Kolumbií a Evropskou Unií vývoz do Evropy?

Je zde více příležitostí růstu vývozu exotického ovoce do Evropské Unie?

Klíčová slova: Kolumbijské ovoce, Kolumbie, Kolumbijský obchod, Evropský dovoz.

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## **ACRONYMS**

CBI Center for the promotion of imports from developing countries

CIA Central Intelligence agency

The EU European Union

EUROSTAT European statistics

FOB Free on Board

FAO Food and Agriculture organization of the United Nations

FAOSTAT Food and Agriculture organization of the United Nations

ILO International Labor office

KG Kilograms

OECD Organization for Economic Co-operation and Development

US United States

USD The United States dollar

UNCTAD United Nations Conference on Trade and Development

WTO World Trade Organization

# **1. INTRODUCTION**

Colombia is one of the most diverse countries in the world located right in the Ecuador, which enables a variety of climate zones and ecosystems allowing the production of more than 95 different types of fruits (CBI, 2016).

This strategical position is taking place at the economic level. Colombia always characterized by a country dependent on miner-energetic resources is focusing now on diversification of exports, where fruits have an important participation.

In 2013, the government of Colombia signed a free trade agreement with the EU which to increase the potential of exports to 503 million consumers across this economic group. Thanks to the agreement, the fruits enter duty-free, where previously they incurred up to 17.6% (CentralAmericanData, 2016).

Due to the importance of this topic for the economy of Colombia, analyzing the situation and finding what is happening with fruit exports, this thesis is considered relevant and innovative to develop.

## 2. OBJECTIVES AND RESEARCH QUESTIONS

**The Objective** is to analyze if the Colombian free trade agreements with the European Union increased the fruit exports.

### **Specific aims:**

- Evaluate the current situation of agriculture regarding fruits in Colombia.
- Identify the departments producing the fruits in Colombia.
- Investigate the EU fruit imports per country.
- Examine the EU imports by fruit classification.
- Specify the main departing cities
- Explain the type of cargo regarding fruit exports.
- Measure, the leading EU countries, importing the fruits in 2015.

### **Research questions:**

- Did the Colombian free trade agreement with the European Union increase the fruit exports to the European Union?
- Are there more opportunities to increase the exports to the EU?

**The theoretical background** for the study takes into consideration scientific articles, graphics, comparisons, economic and mathematical statistics, international statistics, e-books and books, all this previously information is taken mainly from Google Scholar, governmental web pages such as Procolombia.com, CBI, and FAO.

## **3. LITERATURE REVIEW**

### **3.1 Trade definition**

Due to countries need each other for mutual benefit to develop international relations to support their economies, many of them are involved in gains of trade expressed by selling goods and services (Krugman, 2006).

Trade is directly related to history and since the Second World War, according to FAO, a vast group of commodities have boosted world agriculture trade and the main reasons have been due to advantages with the collaboration of communication and transportation advancements.

Some strong arguments supporting trade which have been stated by economists are evident and noticeable; meanwhile others are considered less recognizable.

The arguments are organized into three classes:

1<sup>st</sup>: Increased consumption argument: When goods and services are incremented and are directly proportional to population increase.

2<sup>nd</sup>: Diversification argument: When there is a variety of goods and services to the population.

3<sup>rd</sup>: Stability argument: When there is a permanent and solid supply and price for goods and services.

The previous arguments are supported by developing and developed countries as crucial statements to keep working with strategies to improve their economies (FAO, 2000).

## 3.2 World Overview

The world trade has shown a passive rehabilitation regarding trade since 2011.

From the period 2011 to 2013 it can be mentioned the following figures:

- The main participants in international trade are the developed countries. Their trade in goods accounts for half, and service accounts two-thirds, respectively.
- Developing countries still keep entering the international markets but in a slow process compared with developed countries.
- Regarding the value of trade, the most representative categories are fuels (USD \$3 trillion, 2013) and chemicals (USD \$2 trillion). Trade in commodities has declined, but manufacturing such as vehicles, machinery and electronics have boosted. On the other hand, agriculture has been constant and services grew accounting USD\$ 1 trillion in 2013.
- East-Asian countries have played in term of others more international trade, meanwhile Latin American and Sub-Saharan African countries in overall have presented a decrease in their participation internationally.
- World trade increased 2% per year but not outstanding like 5% achieved in the pre-crisis period.
- World trade in merchandise increased almost half a trillion US\$, which means around a USD\$ trillion in 2013.
- World trade in services increased approximately USD\$4.3 to 4.7 trillion. A mix of a slow demand for imports and lower commodity prices in many countries caused the slow increment in the world trade. The gain of trade since 2011 has been restricted and mainly led by the East Asian region imports, but in overall the flows of international trade are broader that 2008 crisis.
- World trade in services was larger than trade in goods and since 2013, they represent 20% of trade internationally.

- In international trade, developing countries have continued picking up market, despite the fact that service continues comparably low.
- Concerning groups of significant trade, East Asian countries have led the South-South trade. Regarding developing countries, since 2011 Africa has been stagnated in international trade.
- Since 2011, international trade in commodity has decreased, though manufacturing has expanded. On the other hand, agriculture has kept the same.
- Services have had an overall positive growth achieving USD \$ 1 trillion per year, and this figure includes business, transportation and travel categories.
- About export, exactly Africa is focused on a small group of products, it shows trade imbalances specifically in Sub-Saharan countries (UNCTAD, 2015).

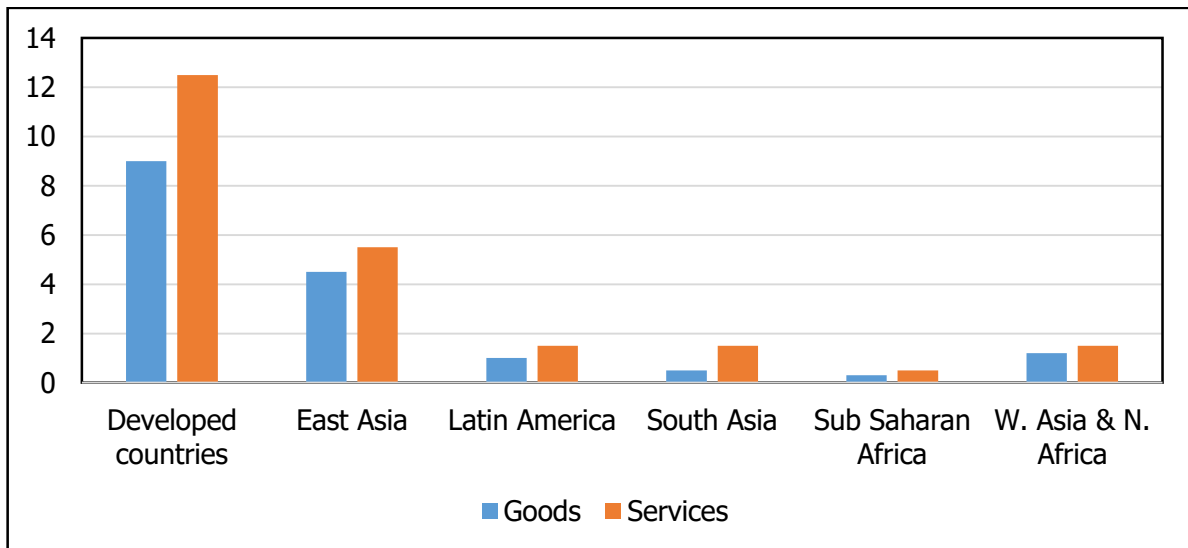
Regarding world trade by region, it can be seen in the next graphs:

**Figure1. Imports of goods and services in trillion \$USD 2013**



Source: Own computation based on (UNCTAD, 2015).

**Figure2. Export of goods and services in trillion \$USD 2013**



Source: Own computation based on (UNCTAD, 2015).

### 3.3. Agriculture Overview

#### 3.3.1. Definition

Agriculture is the farming of plants, animals and all types of food and other products to support human life (ILO, 2000). The primary crop groups are the following (FAOSTAT, 2010)

Primary crops: These crops come directly from the land, and they are clean without any industrial intervention.

- Cereals: These are dry grain. Ex: Wheat, Rice, Paddy, and Maize.
- Roots and Tubers: Ex: Cassava.
- Sugar: Ex: Sugar Cane and Sugar Beet.
- Pulses: These are green crops. Ex: Green peas, green beans.
- Nuts: These are nuts in the shell or the husks.
- Oil: These are crops for edible or industrial purposes. Ex: Cotton (lint and seed), Flax, Hemp, etc.



- Vegetables: Only those vegetables which are cultivated exclusively for human food. Crops cultivated both as field crops and garden crops in the open or under glass.
- Fruit: These are crops principally from trees, bushes, shrubs, vines, and palms. They are usually separated. However, they are found in bunches or clusters (Ex: Bananas). Today, crops for profit-making purposes are harvested in large tracts of land, though; important amounts of fruits are taken from scattered plants. It is important to mention that fruits are easily spoiled, and their life usability might be reached out through the use of chemicals to avoid the development of bacterium and microbe organisms. Also, after the fruit is ready for commercialization, their surroundings should be carefully supervised regarding humidity and temperature (FAO, 1994).
- Stimulants: These are crops that are composed of particular chemical compounds such as alkaloids, caffeine theine, and theobromine, among others. Ex: Coffee Green, Cocoa Beans, and Tea.
- Spices: These are considered ripe, dried and powdered products.
- Forage products: Fodder crops are given to animals as green feed.
- Tobacco.
- Natural rubber: These refer to the latex which can be dried or pure.
- Fibers, vegetal or animal origin: These are crops mainly for oil and cakes production.

### **3.3.2. Importance**

According to the World Bank, agriculture plays a key role in the world economy and according to population prognosis towards 2016; it is considered an industry to deal with severe poverty and to feed 90 billion people. Analyzing the impact of other sectors and comparing them with agriculture, expansion of agriculture brings more prosperity in about three percent more regarding rural areas and the poorest communities. It is, therefore, significant for the poorest world communities, which accounts an overall percentage of 78, the developing of agriculture to offer them living opportunities (Worldbank, 2016).

Consequently, agriculture in a sustainable way has a variety of advantages regarding the economy, human societies, and biodiversity conservation.

### **3.3.3. Tendencies**

- Food demand growth: The world population will increment 47% which means 8.9 billion towards 2050.
- Increase in efficiency: Producers should maintain and improve harvesting to fulfill the demands which are expected to double in the next 30 years.
- Innovation: As a key of challenging changes in the overall population, growers will have to include and develop new strategies according to the future needs. There are some companies which already have developed innovation for their products and to mention an example is Chiquita Company and their bananas with special membrane doubling the shelf-life of the fruit.
- Smart packaging: This trend refers to the evolution and advancement regarding packaging that can help in the understanding of nutrition labelling needs, traceability and in general with the usage of the product.

- Energy prospects: Agriculture industry helps countries to avoid dependence on hydrocarbons. And there are already countries working on strategies to stop the dependence. An example is Europe that has a strategy to use 20% of biofuels by 2020, and its prognosis shows a replacement of 30% of petroleum imports by agriculture alternatives.
- Health snack market: Nowadays people do not have enough time and the accessibility of fruit snacks, for example, is gaining market share. According to the International Fresh-Cut Produce Association fruit snacks are competing with conventional ones, and the figures showed an increase of 8.8 billion to 10.5 US billion by 2004.
- Communication producer-consumer: Nowadays, safety regarding food has been more relevant for consumers, and they have been more involved regarding information about what they eat, so the increase of communication is and will be stronger in the next decades.
- The importance of partnerships in the value chain: This trend has turned into a complex tool to enhance the agricultural process. Fast change in innovation will involve working together with retailers, buyers, suppliers, consumer among others (JimCarrol, 2015).

### **3.4. Colombia profile overview**

#### **3.4.1. Economy**

The Republic of Colombia is situated in the North of South America, and it is bordered by the Caribbean Sea and the North Pacific Ocean. It shares frontiers with Panama, Venezuela, Brazil, Ecuador and Peru. Some key facts are (Cancilleria, 2016) (CIA, 2015):

- Administrative divisions: 32 departments and the capital district Bogota.
- Regions: Andean, Caribbean, Pacific, Orinoco, Amazon and Insular.
- Official time: GMT +5 hours Currency: Colombian peso.
- Land area: 1,141,748.00 km<sup>2</sup>.
- Maritime area: 928,660.00 km<sup>2</sup>.
- Population: 46,736,728.00 July 2015.
- GDP (PPP): \$642.5 USD billion (2014).
- GDP Real Growth rate: 4.6% (2014).
- Per capita: 13.500 (2014).
- Unemployment: 9.1% (2014).
- Inflation: 2.9% (2014).

**Figure 3. Colombia Geo-localization**

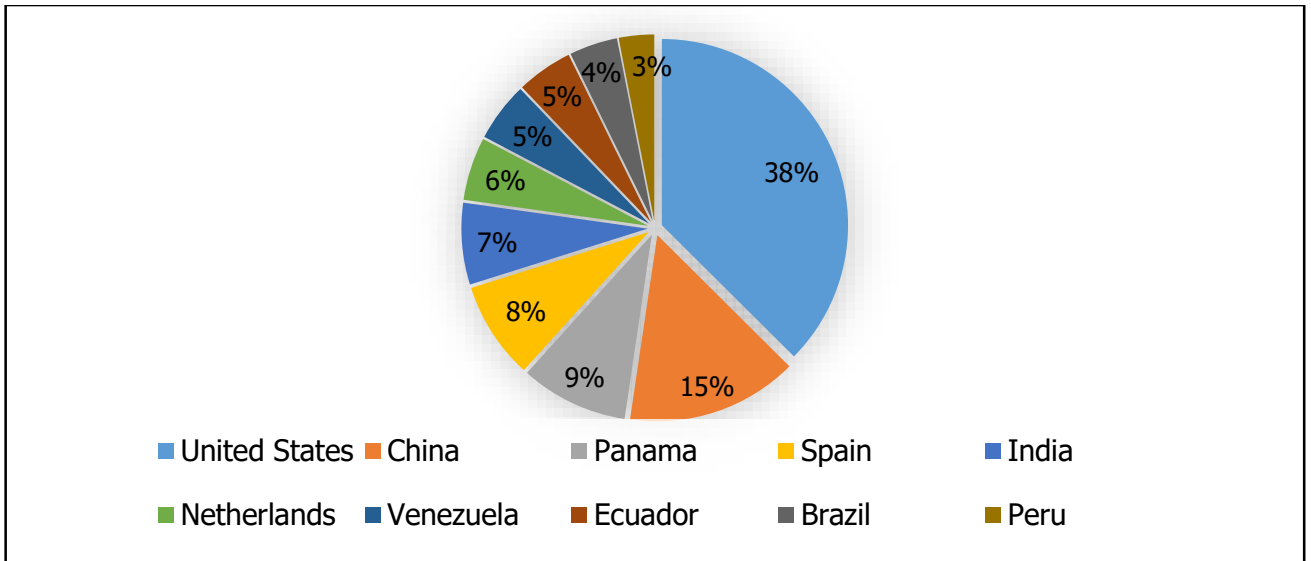


Source: (Google, 2016).

### 3.4.2. Trade

According to the Economic Complexity Index (ECI), Colombia is the 53<sup>rd</sup> biggest economy. The main trade partners are The United States, China, Panama, Spain, India, Netherlands, Venezuela, Ecuador, Brazil, and Peru. This representation is in the graph below:

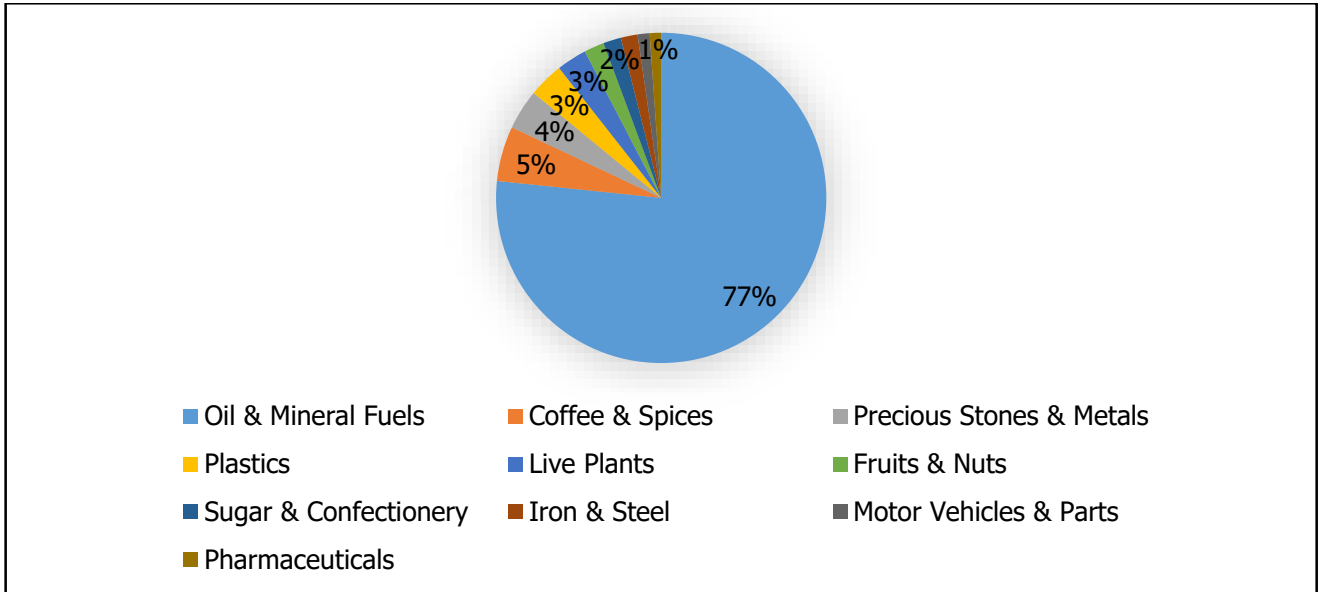
**Figure 4. Colombia Top 10 export partners, in % 2014**



Source: (Globoledge, 2016)

The top import trade partners are United States, China, Mexico, Germany, Brazil, France, Japan, South Korea, India, and Peru. Their participation is in the graph below:

**Figure 5. Colombia top exported goods in % 2014**



Source: (Globoledge, 2016).

### **3.4.3. Free trade with the EU**

The free trade agreement between Colombia and the European Union made accessible to the country 503 million consumers across 28 countries. The consumption of the EU is estimated by USD 32,000 which represents four times more compared with Colombia, widening the export opportunities to the country. This agreement represents not only opportunities regarding international trade but additionally a tool to promote investment from Europe. The European Union has been beside the United States one of the main allies (Procolombia, 2016).

### **3.4.4. Agriculture**

Colombia is situated on the equator and is considered one of the most diverse countries in the world. Due to its location in the tropics, Colombia enables a variety of climate

zones and ecosystems letting the production almost all the year of 95 different fruits (CBI, 2016).

In general, Agriculture has played an important role in the Colombian economy, and their positive impact has been regarding the national economy which involves employment (GDP) and regarding international trade supporting the exports of the country. The annual increment of agricultural production has oscillated during the last two decades showing a slow advancement of 1.6% since 1990. Nowadays, agriculture output report a total average in exports of 11% and its main products have been coffee, bananas, and sugar. Though figures show some positive overview, it is important to mention the internal role that has affected the agriculture sector, and this has been since the 40's when the groups of conflict have displaced people from rural areas whereas the illegal crops have increased. Also, the lack of good policies has affected the structure of the industry. Low productivity is linked with not enough infrastructure and lack of proper value chains. The main purpose of Colombia besides internationalization is helping the victims of conflict in vulnerable agricultural areas (OECD, 2016).

### **3.4.5. Fruit market**

Fruits in general and tropical fruits are considered, for developing countries as Colombia, a good source of economic and nutritious benefits. Especially in Colombia and due to its unique location right on the equator, the variety of fruits are high, and their properties for human health are valuable (CBI, 2016).

Due to FAO, Colombia included in the developing countries group, has broadened its international trade of fruits as a viable option to stop the dependence on common export crops and its descending trend in prices has supported the international trade. Colombia as it is mentioned before, it is considered one of the countries with the most biodiversity and its climate variety let the wide production of 95 types of fruits. These

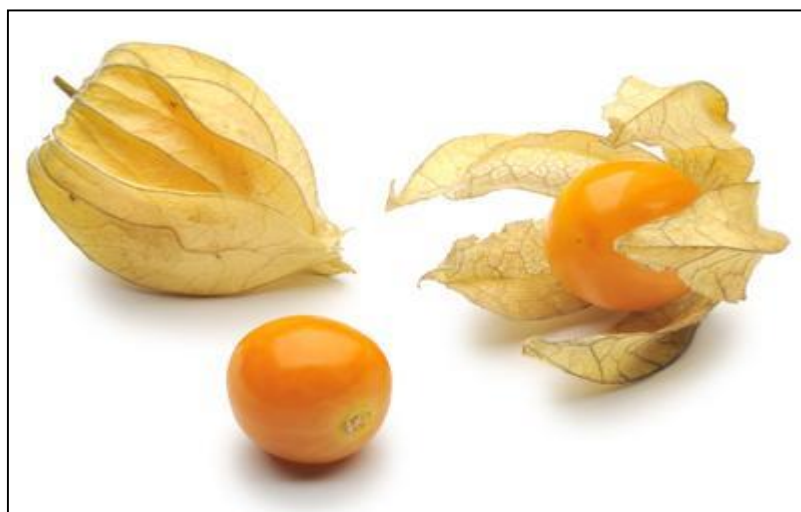
fruits are mainly endemic, but others were brought from other regions around the world. Colombia's location let all year sun allowing harvesting basically during the whole year. In comparison with other countries, Colombian's fruit have better characteristics regarding Brix grades, color, flavor and aroma (FAO, 2011).

As relevant, it is important to mention that Colombia is the world's largest exporter of Golden Berry. Its second largest fruit is Purple Passion Fruit, and Baby banana is a fruit mainly attractive for the European Market. These which are considered the most leading fruits and other not mentioned already are outstanding because of their properties.

### **3.4.6. Classification of fruits**

For this research, the fruits selected were chosen from the data base SICEX (SICEX, 2015). The fruits analyzed are fresh non-processed, and they are the following with their tariff headings:

**Figure 6. Golden berry**  
**0810905000 Physalis peruviana**



Source: (NaturesPride, 2016).



**Figure 7. Purple Passion fruit**  
**0810901030 Passiflora edulis var. Edulis**



Source: (Sakamiranches, 2016).

**Figure 8. Avocado Hass**  
**0804400000**



Source: (Buyfruit, 2016).

**Figure 9. Tahiti lime**  
**Citrus Latifolia**



Source: (Piantedafrutta, 2016).

**Figure 10. Melon**  
**0807190000**



Source: (Foodandnutrition, 2016).

## **3.5. E.U. profile overview**

### **3.5.1. Economy**

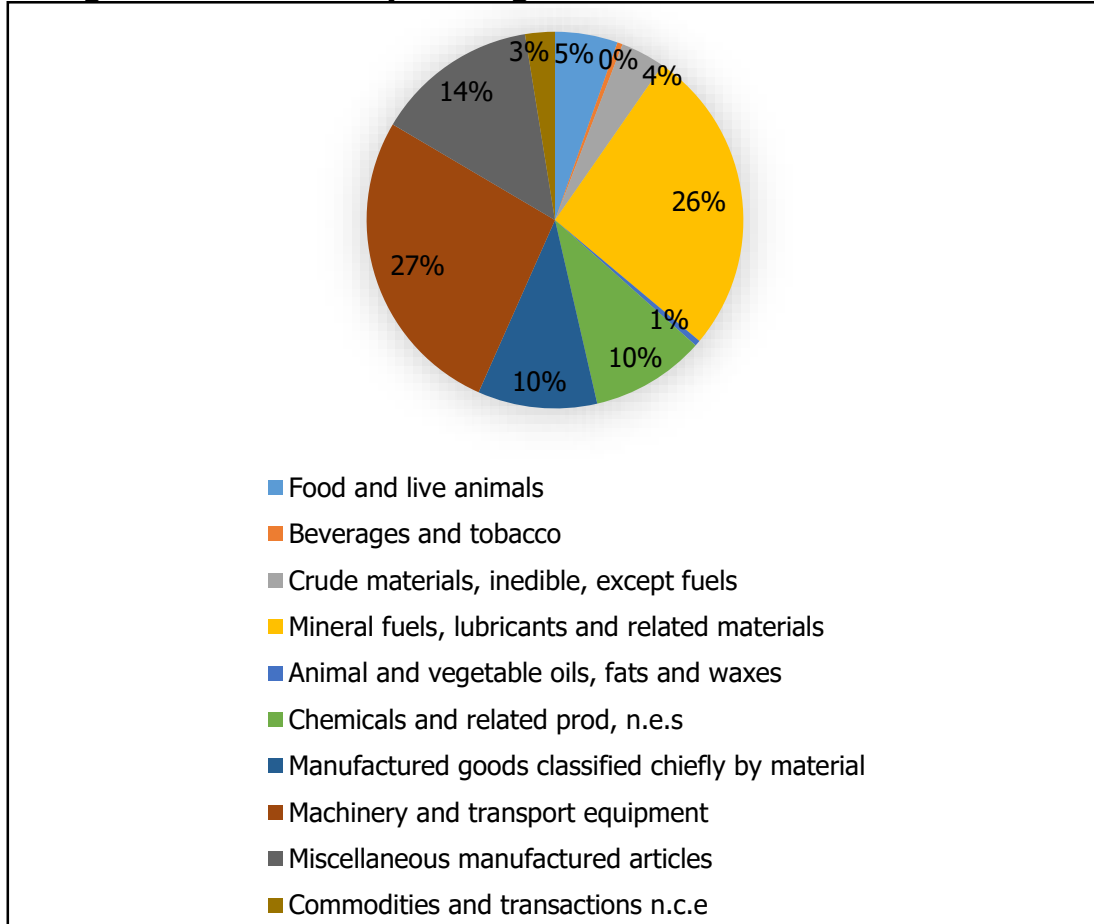
The EU is a political-economic union among 28 countries. The EU was created after the Second World War (Europa, 2015). The countries comprised are Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

The EU economy is just the 7% of the world population, but the GDP, and its global exports are very significant. Compared with the United States of America in 2014, the Gross Domestic Product accounted €13,920,541 million of trade, and overall its participation was 20% of the world international trade. Regarding exports they accounted 15.4% following China (13.4) and the United States (10.5) and concerning imports, it remains the first position comparing the United States which represents 15.5% and China with 11.9% respectively (Europa, 2015).

### **3.5.2. Europe world imports**

The EU main imports are machinery and transport equipment (26.8%) followed by miscellaneous manufactured articles (14.0%) and manufactured goods (10.2%). The rest information about the overall trade is in the graph below (TradeEuropa, 2016):

**Figure 11. EU-28 import of goods from the world in % 2014**



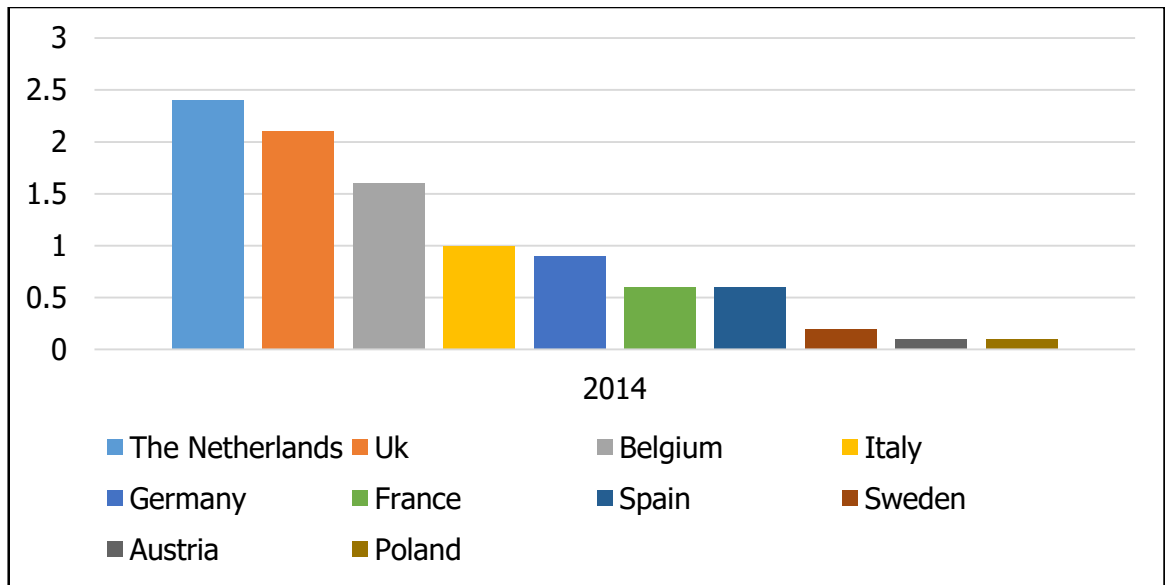
Own computation based on (TradeEuropa, 2016).

### 3.5.3. Europe fruit imports

The European Union and its policies of consumption are strengthening the consumption of fresh fruits and vegetables. Overall the consumption of those have been stable and forth come positive trends are expected. The main importers and main participants in the international trade are The Netherlands, The United Kingdom, and Belgium which are hubs letting the intermediation between developing countries and the rest of the European Union (CBIstatistics, 2016).

Concerning the top 10 countries which imports fresh fruits, 2014 are in the graph below:

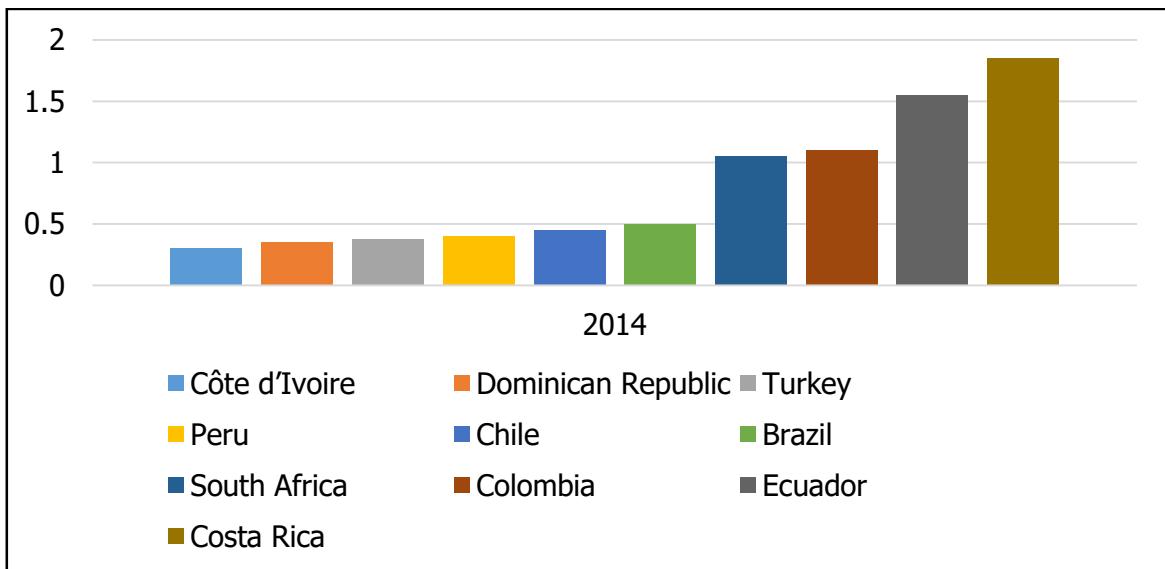
**Figure 12. Top-10 EU importers of fresh fruit from developing countries in € million tons 2014**



Source: (CBIstatistics, 2016).

And the main leading countries in which Colombia is the third one, are shown below:

**Figure 13. Leading developing countries supplying fresh fruit to EU in € million tons 2014**



Source: (CBIstatistics, 2016).

### **3.5.4. Europe demand of Colombian fruits**

The European Union demand for fruits either tropical or exotic has boosted in the last years due to consumers predilection on fresh options. Mainly organic fruits are leading the market, and their consumption is supported by EU law (CBImarket, 2016).

Specifically, fruits such as Mango, Papaya, Pineapple, Golden berry and passion fruit have been demanded and from Colombia the main potential fruit is Golden berry been denominated the main exporter worldwide, and its main buyers are The Netherlands, Germany, and France. Consequently, Purple Passion fruit is the second most significant fruit demanded from Colombia. Baby banana due to its easy way to consume is the third fruit most demanded.

On the other hand, Avocado Hass is highly demanded. However, the EU demand is not covered at all. Tahiti limes and Piel de Sapo Melons represented the most growth in the last years (116%) (CBInfo, 2016).

European consumers are mainly interested in:

- Food quality.
- Fruit characteristics.
- Country of origin.
- Food safety standards and supplier reputation.
- Environmental issues.
- Demand for transparency.
- Products produced in a safe, healthy, green and ethical way.

### **3.5.5. E.U. Legal requirements**

Colombian exporters to sell to the EU must fulfill a list of requirements according to the law and the consumers' preferences (Exporthelp, 2016).

The requirements are:

- Plant-health certificate approved by Colombian authorities.
- Customs and phytosanitary surveillance at the port in the EU.
- The importer must be registered in the “official register” in the EU.
- Notification previously arrival to the port to the customs office.

Some examples of market certifications are EU organic logo, soil association in the UK, Naturland in Germany and Bio Suisse in Switzerland (CBI market, 2016).

Aspects of delivery time, compliance with agreed deadlines, uninterrupted readiness to deliver orders, possibility to supply large volumes and required certifications are also very important. EU importers usually prefer long-term relations with suppliers on which they can rely, so new partnerships and partners are tested and selected carefully.

European consumer’s requirements are Organic, Global Gap, Rainforest Alliance, and international ILO standards, Fair Trade, among others (Procolombia, 2016).

## **4. METHODOLOGY**

The methodology for this research is comparative, graphical, economic and mathematical, statistical analysis, empirical (observation, description), theoretical (Analysis, synthesis, abstraction, generalization, explanation, organization, classification), method of comparative analysis.

The information gathered for this research is from SICEX database. This database is chosen because of permission and truthful information. The information comprises the years 2012-2015, and it was processed with Microsoft Excel.



## **5. ANALYTICAL PART**

### **5.3. SWOT Analysis of Agriculture regarding fruits in Colombia**

SWOT analysis is the brief combination of the words strengths, weaknesses, opportunities and threats that can be applied for the analysis of a specific topic regarding companies and countries. As the word means, this analysis shows a big picture of the current situation, and it can be useful regarding determining the future. Internal factor of the studied topic are strengths and weaknesses, and external factors are opportunities and threats (Investopedia, 2016)

#### **Strengths**

- Geographical location: Colombia is located in the North of South America, and it is bordered by the Caribbean Sea and the North Pacific Ocean. It shares frontiers in the northwest with Panama, to the east with Venezuela and Brazil and the south by Ecuador and Peru (CIA, 2015).
- Natural resources: Colombia is one of the most biodiverse countries in the world, with 14% of the world's total amount. Its six major regions vary considerably in altitude, temperature, and humidity, tropical coasts, savannahs, deserts, mountains are some examples (OECD, 2016). Besides its different climates, water resources are estimated at 4,836 m<sup>3</sup> /capita/year (More than Brazil, Argentina or Mexico). The approximate rainfall is about 3,000 mm/year. However, it varies depending on the regions (OECD, 2016). Also its land area, by having 14 million hectares, Colombia is one of the countries with the greatest potential for expansion of agricultural lands in the world. A total of 4.3 million hectares are used properly. Colombia compared with the world is one of the

countries with the highest variety of soils and climates for growing fruits and vegetables (InviertaenColombia, 2016).

- A variety of fruits: Colombia has a variety of 95 fruits produced in different regions such as hot, warm and cold weather, and many of them are produced all year because of its privileged location right on the equator. Their components compared with other countries in South America are better regarding quality and organoleptic properties (Colombiatrade, 2016).
- Government support for the agriculture sector: In Colombia there are many governmental institutions that currently are supporting the development of the sector. One of the most important ones and directly related to the internationalization of the products is Procolombia. This agency is in charge of non-mining energetic exports which includes the agro-industry as a key sector for expansion. Through information centers located in the main cities and its website, it offers entrepreneurs, Pymes and for already exporter companies, market information, and analysis of sectoral documents oriented for opportunities abroad (ProcolombiaInfo, 2016).
- Workforce: In 2015, the total population of Colombia was 46,736,728 (CIA, 2015). And Colombia has a comparably young population that can be exploited by the agriculture sector (OECD, 2016).

### **Weaknesses**

- Fruit wasted: Annually, in post/harvest are wasted 1.5 million tons of fruit. And this situation is critical for the producers that are not fully taking advantage of their capacity, and this is representing losses overall (ElCampesino, 2015).
- Internal conflict: The civil conflict started in 1940 when two political parties, the Conservative, and Liberal, disagreed in their ideas and they created two different groups. Due to this division, insecurity has affected farmers in rural areas to

leave their territories and plantations. Besides this, coca plantations and its profitability have affected farmer's decision to plant coca rather than fruits. On the other hand, investors decide not spend in Colombia, affecting the development of the sector (OECD, 2016).

- Inappropriate transport networks: Colombia is not fully taking advantage of its transport capacity. Only 14% of the total road network is paved. Regarding rivers, The Magdalena considered the central connection between the Andes and the Caribbean coast is used to connect those two regions, but the effectiveness regarding price is high due to the long distance between production and port areas. If it is compared with Brazil and Chile, Colombia has three times more the average in distances and six times in comparison with Argentina (OECD, 2016). Per day the number of cargo vehicles that pass through Colombian territory is around 40,000, and according to Clarita de la Rua, the director of the transport association Defencarga, says that this increases costs in 35%, it wears vehicles 14%, and consumption of fuel increases 16%. (ElPais, 2016). It is not only the road network but the lack of drying, storage and cooling centers to keep the inventory of fruits are increasing the inventory prices, letting them less competitive internationally (ElTiempo, 2016).

### **Opportunities**

- FTA between Colombia and the EU: The FTA came into force in August 2013, and the diversity of markets in Europe is huge, and the opportunities for Colombia to make their products and services as well, to reach demanding of an affluent population with social and environmental.
- Fairtrade in the EU: Fair Trade is a certification that works as a positive distinctive offering security regarding ethical values of the product. Products that

have Fairtrade certification have high acceptance by European consumers that are more concern about the environment and people (Comerciojusto, 2016).

Though Fairtrade products are more expensive, its popularity is increasing especially in Europe. Consumers are willing to pay more when they are sure that the products are made under equitable conditions and when the revenues are distributed to the producers.

An increase in revenue in this segment is increasing every year, and an example of this is the case of the retail store Karstadt in Germany that sells fair trade plantains (Compromisoempresarial, 2016).

According to The Guardian, Global Fairtrade sales reached 4, 4 billion pounds during the 2013 and this shows the international opportunities that Colombia has to improve (Theguardian, 2016).

- CBI International support for Colombian exporters from The Netherlands: This institution is helping Colombia to find opportunities with the European Union. Their main strong advantages are their prestige, knowledge of the market and a wide professional red of connections that have been taught to Colombian exporters.

## **Threats**

- El Niño phenomenon: It is a warming of the surface waters of the Pacific that affects mainly Southeast Asia, Australia, and South America. This generates an abnormal climate change, such as rising sea temperatures, along with intense rains and droughts (Capital, 2016).

Due to this phenomenon in 2015, there was 30% less rain in Colombia. Victor Vinasco, a farmer in the municipality of la Union, is an example of the current situation. He mentions that the climate change is affecting their crops maturation, which ultimately results in a lower quality.

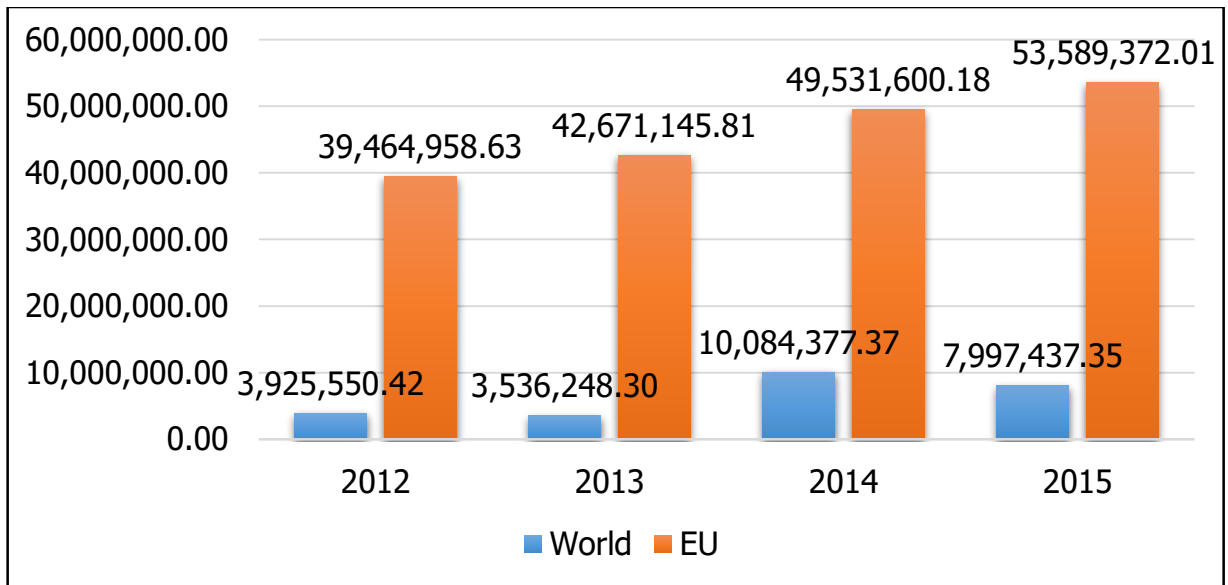
- Latin American competitors: Costa Rica is the first importer of fruits to the European Union, and consequently Ecuador. There are considered threats because they represent the top 2 exporting, and compared with capacity Colombia has bigger, but it is not fully taking advantage of it (CBIstatistics, 2016).
- High dollar: According to Jose Ramos, a professor at IEEC institution, the effects of a high dollar on agricultural goods basically affects farmers because it turns more expensive for them to buy inputs, fertilizers and agricultural machinery (ElHeraldo, 2016).

**Figure 14. SWOT summary**

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Geographical location</li> <li>• Natural resources</li> <li>• Variety of fruits</li> <li>• Government support</li> <li>• Workforce</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>• Fruit wasted</li> <li>• Internal conflict</li> <li>• Inappropriate transport networks</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• FTA between Colombia and the EU</li> <li>• Fair trade in the EU</li> <li>• CBI</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• El niño phenomenon</li> <li>• Latin American competitors</li> <li>• High dollar</li> </ul>

Source: Own computation based on previously mentioned sources.

**Figure 15. Comparison of Colombian fruit exports EU-world in FOB \$USD 2012-2015**



Source: Own computation based on SICEX database.

As it can be seen in figure 15, the EU is the leading economic block regarding Colombia fruit exports since 2012. Comparing EU itself, in 2015, they represented a total amount of \$53,589,372.01 FOB USD which compared with 2012 (39,464,958.63 FOB USD) represented an increase of \$14,124,413.38 FOB USD in 2015. This overall represents an increase of 36%. With respect to the FTA between Colombia and the EU, the increment was \$3,206,187.18 FOB USD in 2013, showing 8% more exports. The FTA has been mainly reflected in 2014 and 2015 where the economic connections with the EU have been enforced.

#### 5.4. Departments of Colombia producing fruits

**Table 1. Departments of Colombia producing fruits in kg 2012**

<b>2012</b>	
<b>FRUIT</b>	<b>NET WEIGHT (KG)</b>
<b>Golden Berry</b>	<b>6,206,791.79</b>
Cundinamarca	5,263,382.15
Antioquia	936,672.36
Bolivar	6,737.28
<b>Purple passion fruit</b>	<b>2,620,660.75</b>
Cundinamarca	2,427,052.35
Antioquia	182,926.40
Bolivar	10,682.00
<b>Melon</b>	<b>658,280.50</b>
Cesar	499,960.00
Guajira	117,130.00
Santander	36,405.00
Cundinamarca	4,785.50
<b>Tahiti lime</b>	<b>109,476.00</b>
Valle	84,480.00
Cundinamarca	24,996.00
<b>Avocado hass</b>	<b>368.16</b>
Cundinamarca	368.16
<b>TOTAL</b>	<b>9,595,577.20</b>

Source: Own computation based on SICEX database.

**Table 2. Departments of Colombia producing fruits in kg 2015**

<b>2015</b>	
<b>FRUIT</b>	<b>NET WEIGHT (KG)</b>
<b>Golden berry</b>	<b>5,451,576.35</b>
Cundinamarca	4,621,109.51
Antioquia	830,331.84
Valle	135
<b>Purple passion fruit</b>	<b>5,353,634.42</b>

Cundinamarca	3,772,383.42
Antioquia	1,553,173.00
Bolivar	22,324.00
Magdalena	5,322.00
Norte de Santander	432
<b>Avocado hass</b>	<b>4,793,076.67</b>
Antioquia	3,271,538.00
Valle	471,999.00
Santander	445,106.00
Cundinamarca	378,269.20
Risaralda	123,781.47
Caldas	82,063.00
Norte de Santander	20,320.00
<b>Tahiti lime</b>	<b>1,285,917.50</b>
Santander	875,952.50
Antioquia	264,400.00
Cundinamarca	63,200.00
Atlántico	60,765.00
Norte de Santander	21,600.00
<b>Melon</b>	<b>11,129.52</b>
Cundinamarca	11,129.52
<b>TOTAL</b>	<b>16,895,334.46</b>

Source: Own computation based on SICEX database.

In 2012, the order of fruits from highest to lowest kg produced are:

1. Golden Berry
2. Purple passion fruit
3. Melon
4. Tahiti lime
5. Avocado Hass

In 2015, the order of fruits changed slightly:

1. Golden Berry
2. Purple passion fruit
3. Avocado Hass
4. Tahiti lime
5. Melon



Colombia has 32 departments but not all produce the selected fruits. The situation before and after the FTA is analyzed in this part of the research.

**Golden Berry** in 2012 even though Bolivar stopped producing and Valle took its place, this fruit in 2015 remains been harvested in Antioquia and Cundinamarca. In 2015, the production decreased -755,215.44 kg and the leading department producing in 2015 was Cundinamarca.

**Purple passion fruit** in 2012 was produced in Cundinamarca, Antioquia and Bolivar but in 2015, two more departments such as Magdalena and Norte de Santander started producing. In 2015 the production increased 2,732,973.67 kg and the leading department producing in 2015 was Cundinamarca.

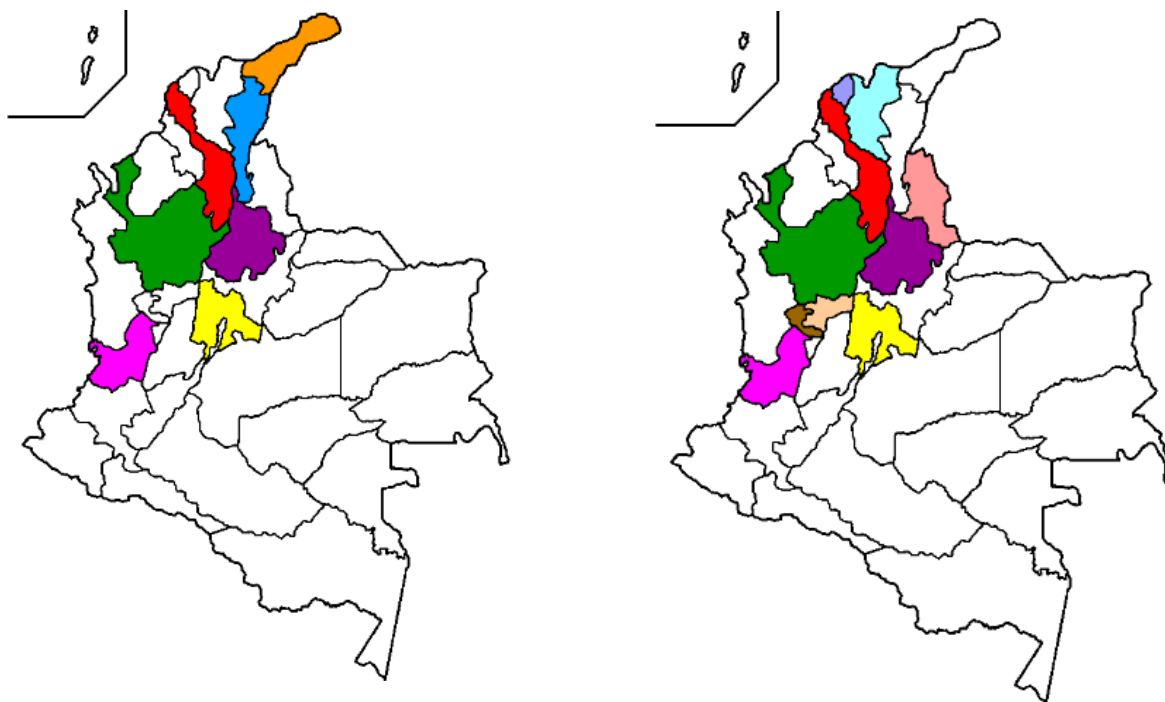
**Melon** in 2012 was produced by 4 departments (Cesar, Guajira, and Santander y Cundinamarca). In 2015 the production decreased -647,150.98 kg and the leading department was Cundinamarca.

**Tahiti lime** though Valle stopped producing in 2012, in 2015 4 departments started producing (Santander, Antioquia, Atlántico and Norte de Santander). In 2015 there was an increase of 1,176,441.50 kg and Santander in 2015 was the leading department producing this fruit.

**Avocado Hass**, in 2012 was only produced by Cundinamarca, but in 2015 besides Cundinamarca, 6 new departments started producing (Antioquia, Valle, Santander, Risaralda, Caldas and Norte de Santander). In 2015, the production increased 4,792,708.51 kg and the leading department was Antioquia.

Overall, as it can be seen in figure 16, even though in 2012 2 departments stopped producing, 5 new departments in 2015 started producing (Magdalena, Atlántico, Norte de Santander, Caldas and Risaralda). Overall, the production in 2015 increased 7,299,757.26.00 (76%). In 2015, the leading departments were Cundinamarca producing Golden Berry, Purple passion fruit and Melon, meanwhile Avocado was Antioquia and Tahiti Lime was Santander. The situation, in general, is positive.

**Figure 16. Comparison of departments producing fruits before and after the FTA 2012-2015**



Source: Own based on SICEX database and dibujos para colorear.

- Bolívar
- Antioquia
- Cesar
- Santander
- Cundinamarca
- Valle del Cauca
- Magdalena
- Atlántico
- Norte de Santander
- Caldas
- Risaralda

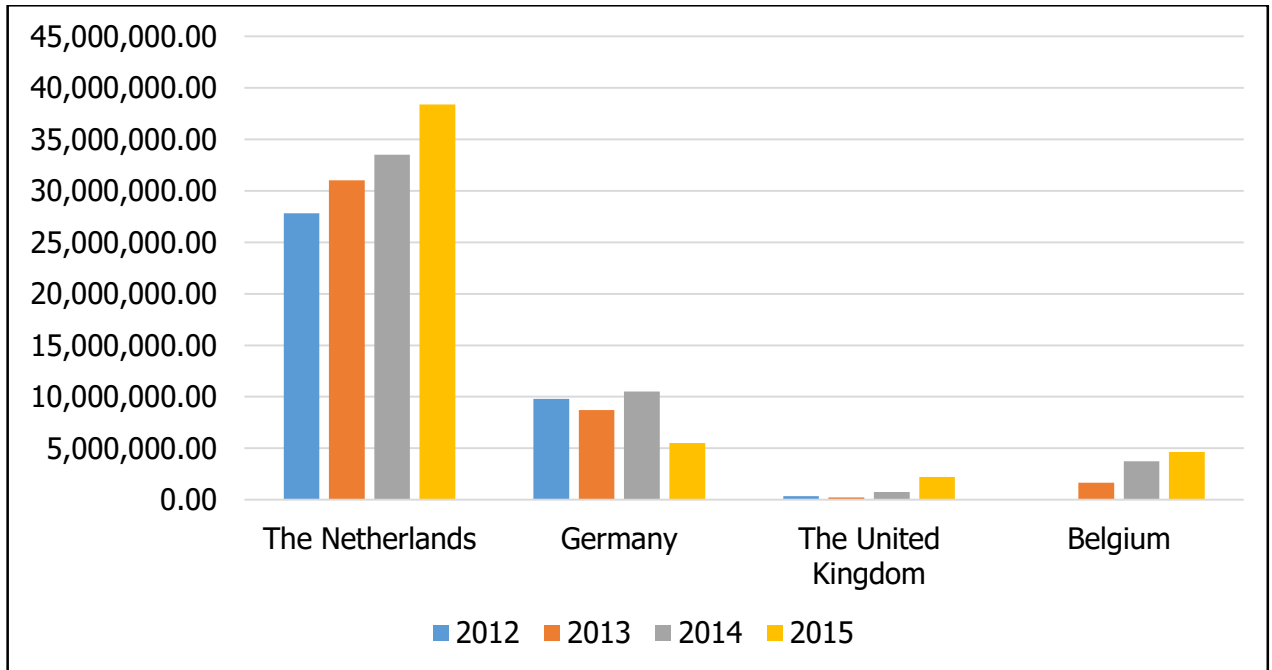
## **5.5. EU Fruit imports per country**

This section shows information about leading EU countries importing the fruits during 2012-2015. Also, those countries that have started and stopped participating during this period. For a better understanding, countries have been divided into two groups. The (I) first group which includes (The Netherlands, Germany, Belgium and The United Kingdom) were selected because these countries have imported more than 1,000,000.00 FOB \$USD and are considered the leading fruit importers.

The II group (Spain, France, Italy, Switzerland, Ireland, Portugal, Norway, Sweden, Romania, Denmark, and Austria) were chosen because they have imported less than 1,000,000.00 FOB \$USD.

As it can be seen in figure 17, the top leading fruit importers are The Netherlands, the second in Germany, the third is Belgium, and the fourth is the United Kingdom respectively. The Netherlands during the four years of analysis has been the most important trade partner, and this can be explained because of its port importance in the EU. Germany, Belgium and The United Kingdom have included as well as the EU countries with the top 10 ports, according to Eurostat Statistics (EUROSTAT, 2016).

**Figure 17. EU fruit importers I group in FOB \$USD 2012-2015**

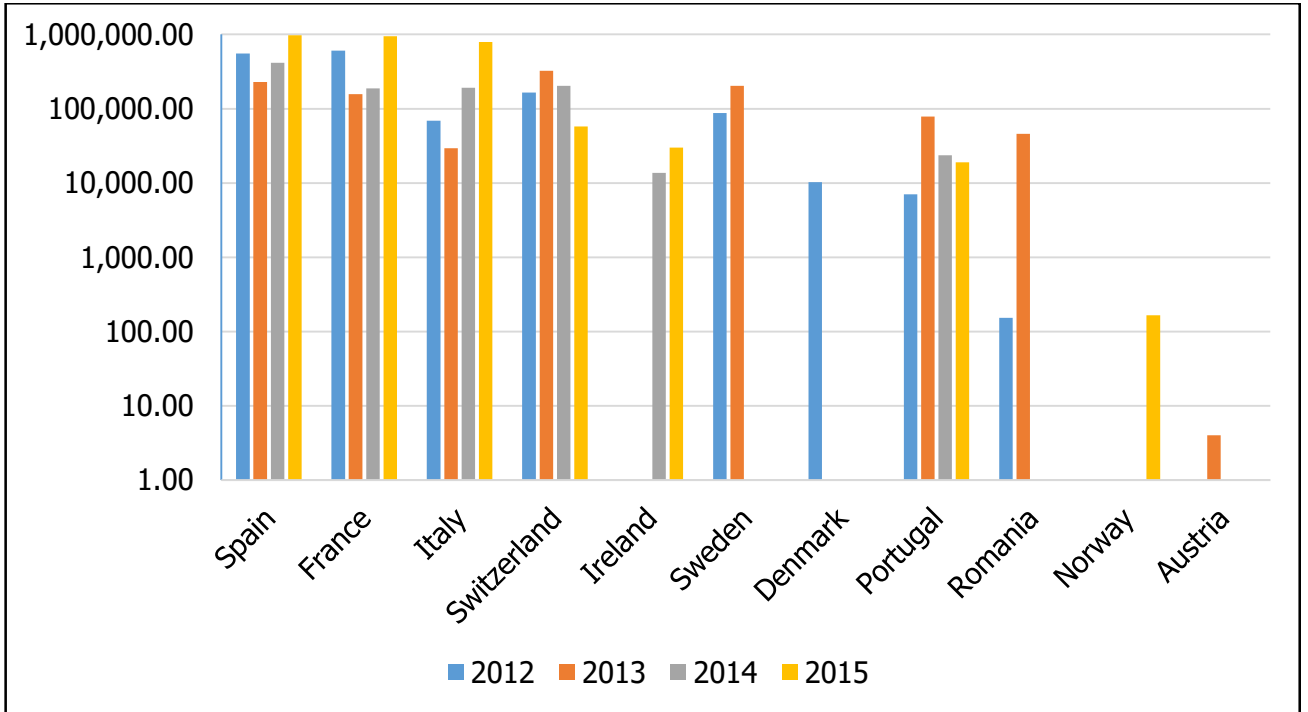


Source: Own computation based on SICEX database.

In figure 18, it can be seen the II group. Important facts that can be analyzed are the countries participation. Those countries which showed non-consistent patterns of imports were Denmark, which just participated in 2012, Austria, which just participated in 2013 and Romania and Sweden in 2012 and 2013 respectively.

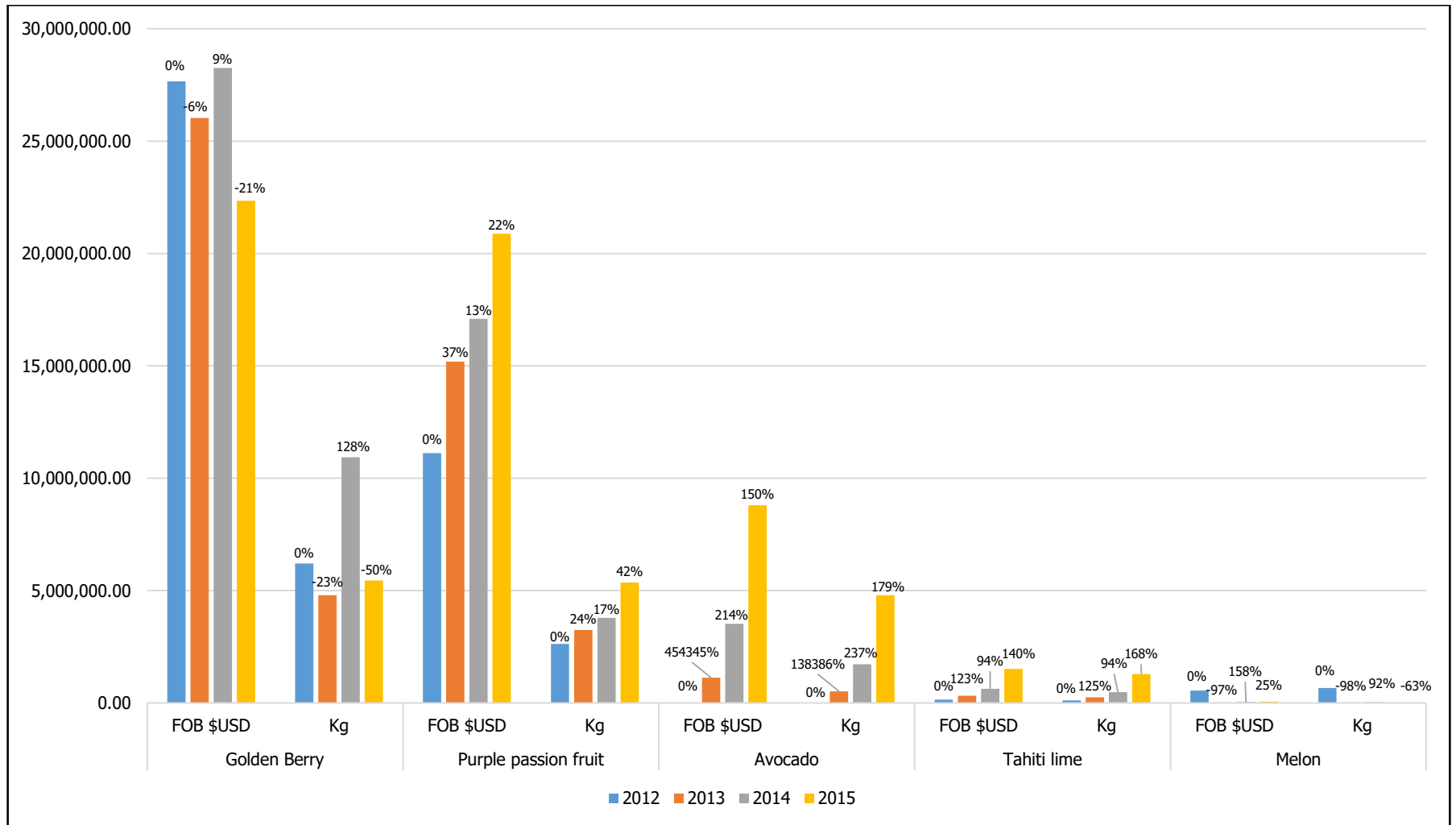
Regarding new countries, those that started participating are considered Belgium with a strong involvement since 2013 which still continues till 2015, Ireland, which entered in 2014 and 2015 and Norway, which started participation in 2015. The countries which remain stable during the four years of analysis are France, Germany, Italy, Portugal, Spain, Switzerland, The Netherlands and The United Kingdom respectively.

**Figure 18. EU fruit importers II group in FOB \$USD 2012-2015**



Source: Own computation based on SICEX database.

**Figure 19. EU imports by fruit classification in net weight kg and FOB \$USD 2012-2015**



Source: Own computation based on SICEX database.

## 5.6. EU imports by fruit classification

In figure 19, the order of fruits regarding biggest amount of FOB \$USD values and net weight kg are:

- 1.) Golden Berry
- 2.) Purple Passion fruit
- 3.) Avocado
- 4.) Tahiti lime
- 5.) Melon

Golden Berry, is the fruit most exported to the EU and its participation has not been stable. In 2012, the total amount exported was 27,656,984.93 FOB \$USD but in 2013 there was a decrease of 6% (-1,627,485.74 FOB \$USD). In 2014, it recovered again increasing 9% (2,228,034.76 FOB \$USD), but then, in 2015 there was a big decrease of -21% (-5,906,937.31 FOB \$USD). The net weight variation has been for 2013 -23% (-1,409,731.59 kg), 128% in 2014 (6,132,970.30 kg) and -50% (-5,478,454.15 kg) respectively.

Purple passion fruit, considered the second most exported in the category has had an increasing participation during the last 3 years. In 2013, where the FTA came into force it had an increase of 37% (4,071,184.78 FOB \$USD), then in 2014 it had an increase of 13% (1,904,813.87 FOB \$USD) and in 2015 it increased as well 22% (3,792,129.74 FOB \$USD). Regarding net weight, in 2013 it had an increase of 24% (621,226.53 kg) in 2014 still an increase of 17% (537,728.30 kg) and in 2015 was a surprisingly increase of 42% (1,574,018.84 kg).

Avocado, considered the third most exported to the EU showed a surprisingly increase of 454,345% (1,118,461.76 FOB \$USD) in 2013 compared with 2012 (246.17 FOB \$USD). In 2014 and 2015 showed interesting figures. For example, in 2014 increased 214% (2,396,234.45 FOB \$USD) and in 2015 increased 150.18 % (5,278,828.64 FOB \$USD).

\$USD). The net amount exported has been relatively stable and directly proportional with the FOB values. In 2013 the increase was 138,385.93% (509,481.63 kg) compared with 2012 (368.16 kg). In 2014 the increase was 236.79% (1,207,276.08 kg) and in 2015 was 179% (3,075,950.80 kg)

On the other hand, Tahiti lime has shown a positive increase during the four years. For example in 2013 it increased 123% (178,817.85 FOB \$USD), in 2014 it increased once more 94% (306,026.79 FOB \$USD) and in 2015 increased 140% (883,601.00 FOB \$USD). Concerning weight it has increased as well. In 2013 125% (137,390.71 kg), in 2014 94% (232,486.29 kg) and in 2015 168% (806,564.50 kg).

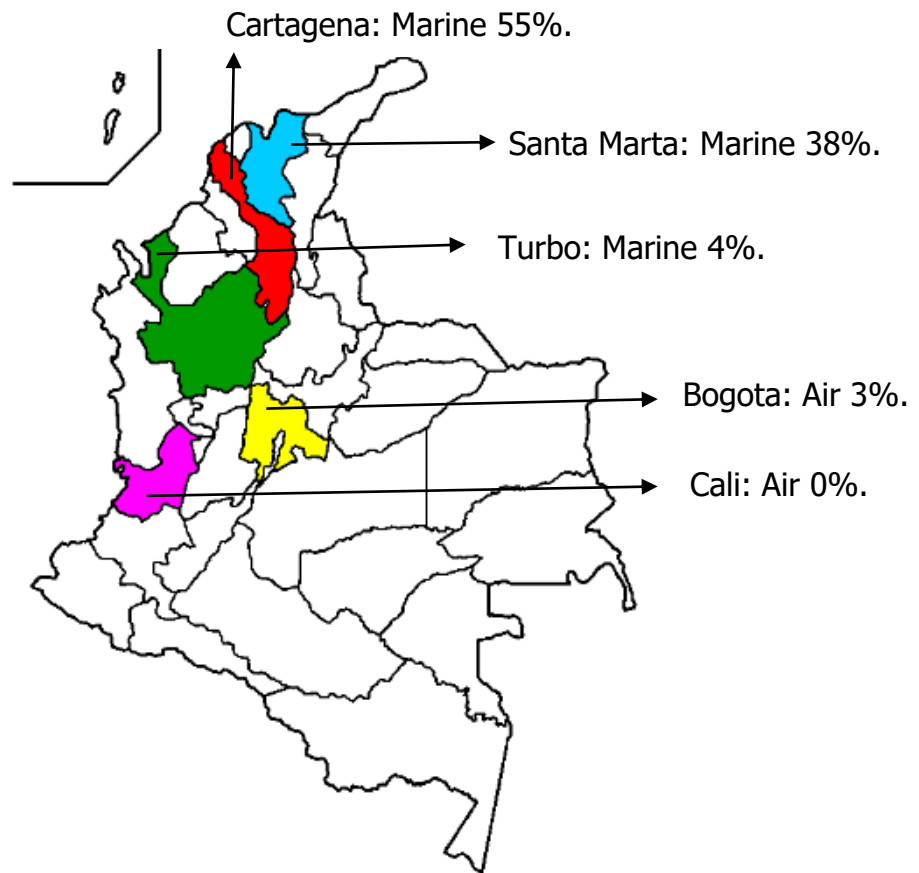
And Melon has had a non- consistent figures. In 2013 just right after the FTA came into force, FOB values decreased -97% (534,791.47 FOB \$USD) and net weight decreased proportionally -98% (642,758.50 kg). Regarding 2014, it increased 158% (25,344.50 FOB \$USD) and net weight increased as well 92% (14,235.00 kg). About 2015, values increased 25% (10,149.76 FOB \$USD) but net weight decreased -63% (-18,627.48 kg). Which means more US dollars were paid for less melons, explaining an increase of its price.



## 5.7. Departing cities

As it can be seen in figure 20, from a total of 16,895,334.46 kg sent to EU in 2015, the leading cities where the fruit was departing were Cartagena which accounted 55% and Santa Marta which accounted 38%. Turbo, Bogota, and Cali represented low participation.

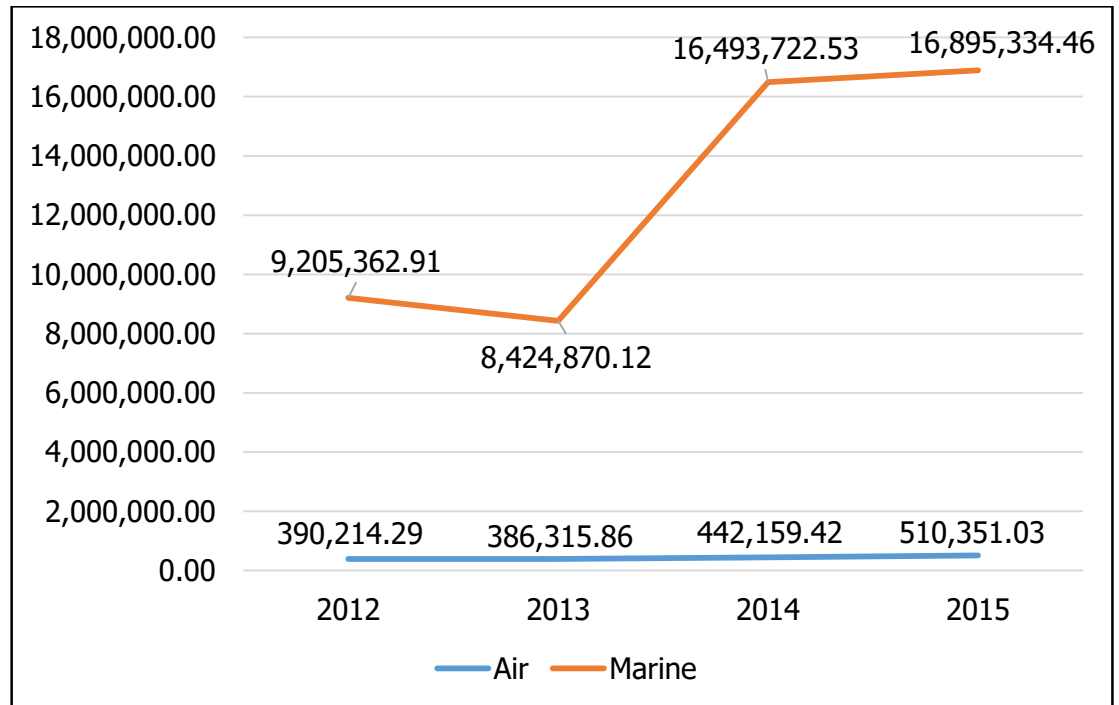
**Figure 20. Departing cities in kg % 2015**



Source: Own computation based on SICEX database and dibujos para colorear.

## 5.8. Type of cargo

**Figure 21. Type of Cargo in kg 2012-2015**



Source: Own computation based on SICEX database.

As it can be seen in figure 21, marine cargo keeps leading exports and air has had a slightly increase.

In 2013 air decreased participation -1% exporting less weight (-3,898.43 kg), in 2014 it had an increase of 14% (55,843.56 kg) and in 2015 it had an increase of 15% (68,191.61 kg).

Regarding marine it decreased -8% in 2013 (-780,492.79 kg), in 2014 increase 96% (8,068,852.41 kg) and in 2015 increased 2% (401,611.93 kg).

**Table 3. Type of cargo in kg 2015.**

<b>CARGO/COUNTRY</b>	<b>NET WEIGHT (KG)</b>
<b>AIR</b>	<b>510,351.03</b>
The Netherlands	186,854.66
Germany	177,605.63
France	79,764.00
Spain	19,533.16
Belgium	14,204.52
Italy	9,836.30
Ireland	9,393.22
Switzerland	5,490.19
The United Kingdom	3,389.85
Portugal	4,240.50
Norway	39.00
<b>MARINE</b>	<b>16,384,983.43</b>
The Netherlands	11,153,277.16
Germany	1,317,039.14
Belgium	1,246,495.16
The United Kingdom	1,092,569.60
Spain	647,523.47
Italy	520,396.90
France	407,334.00
Switzerland	348.00
<b>TOTAL</b>	<b>16,895,334.46</b>

Source: Own computation based on SICEX database.

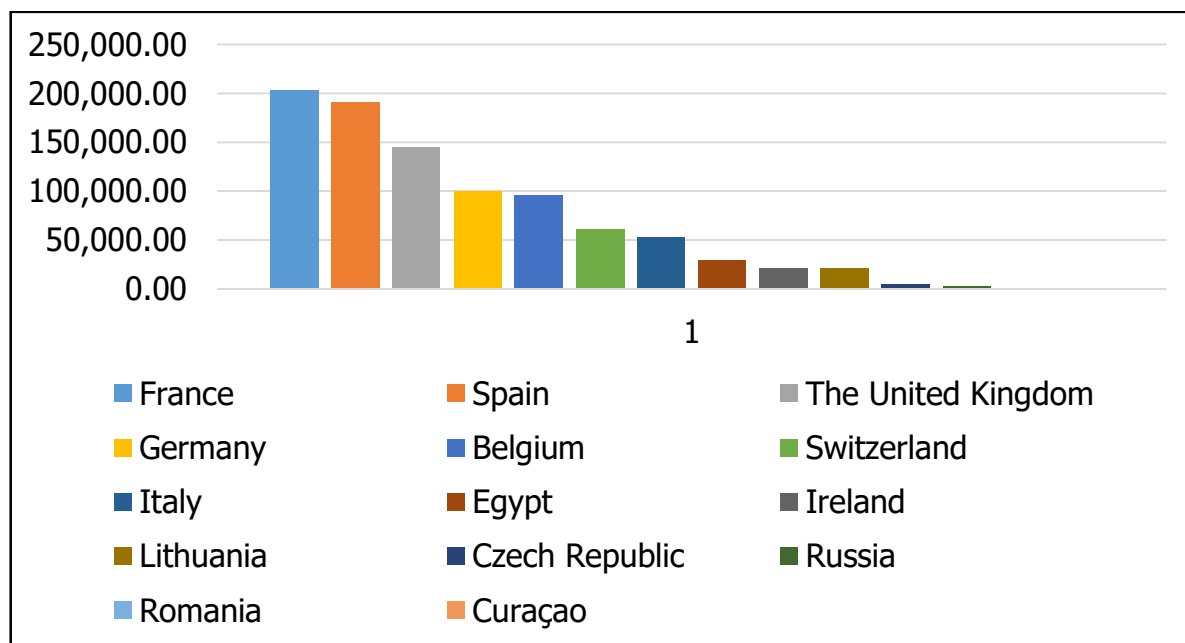
As it can be seen in Table 3, the leading type of cargo is marine and then air. The leading countries importing by both types of cargo are The Netherlands and Germany.

## 5.9. Leading EU countries importing fruits in 2015

In 2015, there was a total of 53,589,372.01 FOB \$USD imported to the EU, and this total amount was represented in 16,895,334.46 net weight. Now, it is going to be analyzed the leading countries importing fruits.

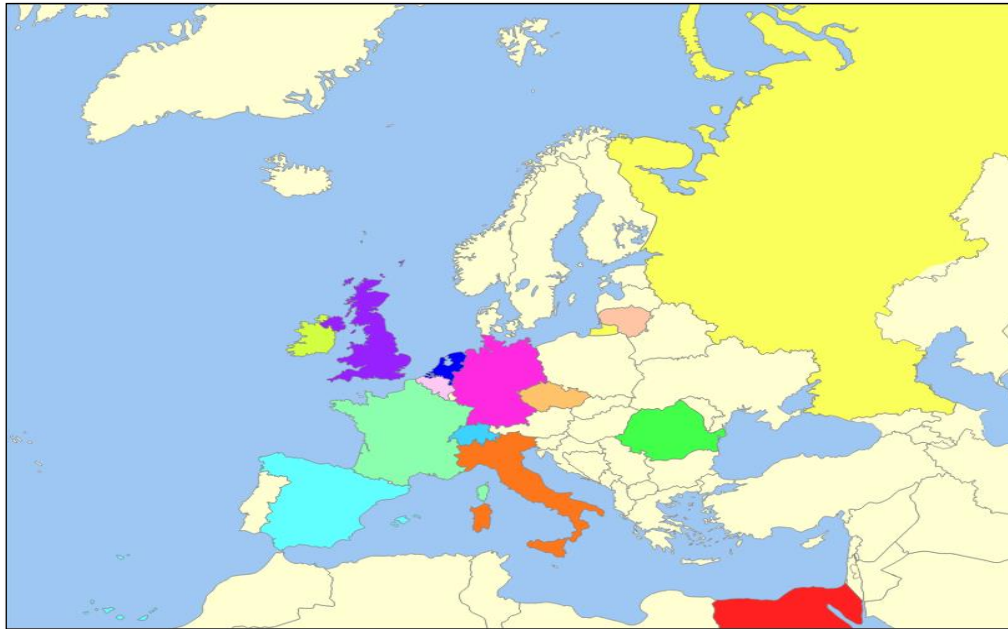
**The Netherlands:** The Netherlands imported 92% (11,340,131.82 kg) of fruits. From this total 10,413,381.33 kg was done by importers established in this country. But the remaining 8% (926,750.49 kg) was imported by companies located in the following countries in figure 22 within the EU and the special case of Curaçao which is a country in the southern Caribbean Sea, and it is a constituent country of the Kingdom of the Netherlands (Curazao, 2016).

**Figure 22. Countries importing through The Netherlands and its total amount in kg 2015**



Source: Own computation based on SICEX database.

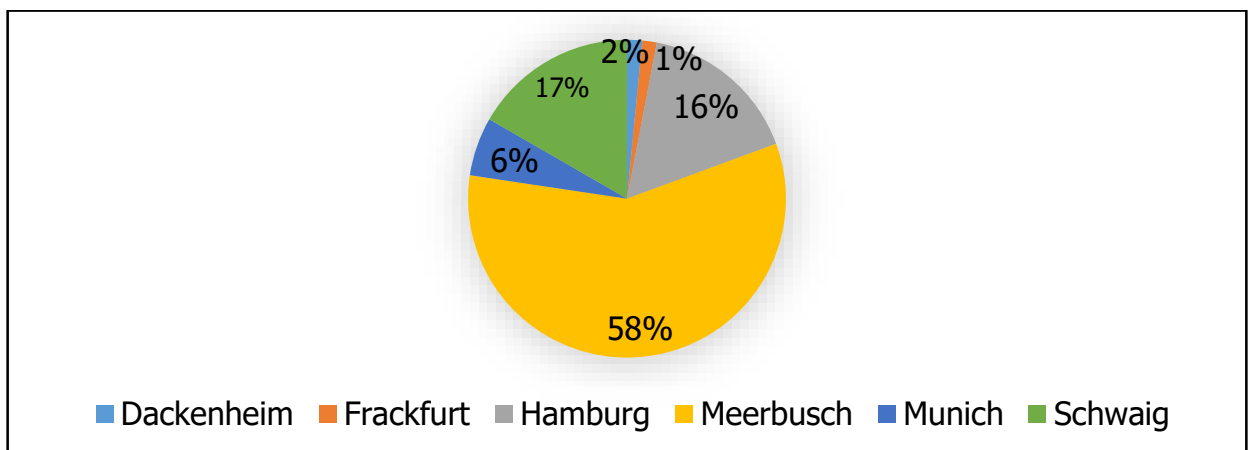
**Figure 23. Geographic map of countries importing through The Netherlands in 2015**



Source: Own computation based on SICEX database.

**Germany:** All the amount imported was done by German importers. The total amount imported was 9% (1,494,644.77 kg). The main regions can be seen in figure 24.

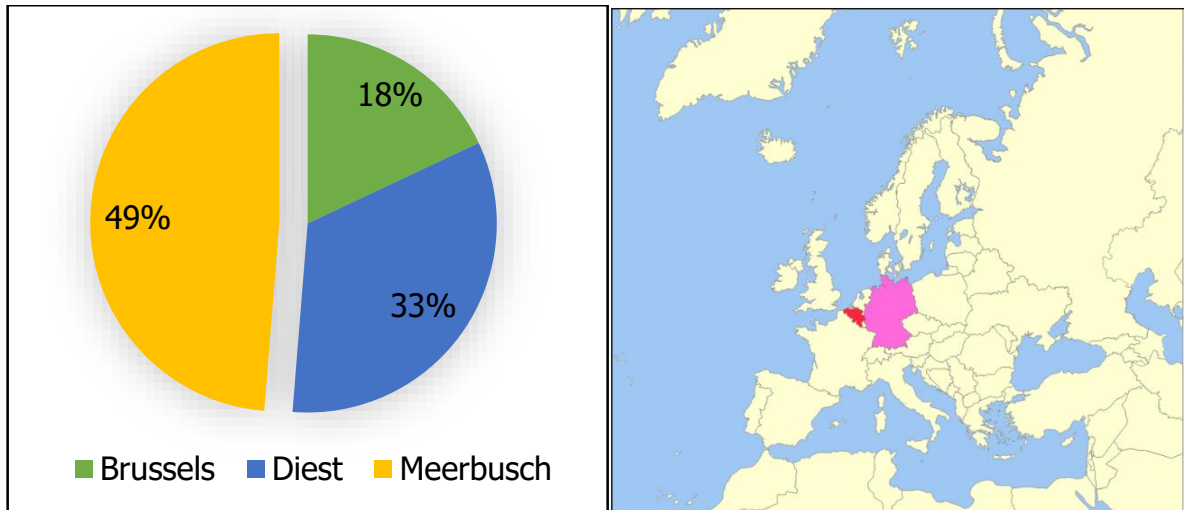
**Figure 24. Germany imports in kg % 2015**



Source: Own computation based on SICEX database.

**Belgium:** Belgium imported 7% (1,260,699.68 kg) 51% of this total was done by Belgian companies Meanwhile German companies did 49%. The main regions can be seen in figure 25.

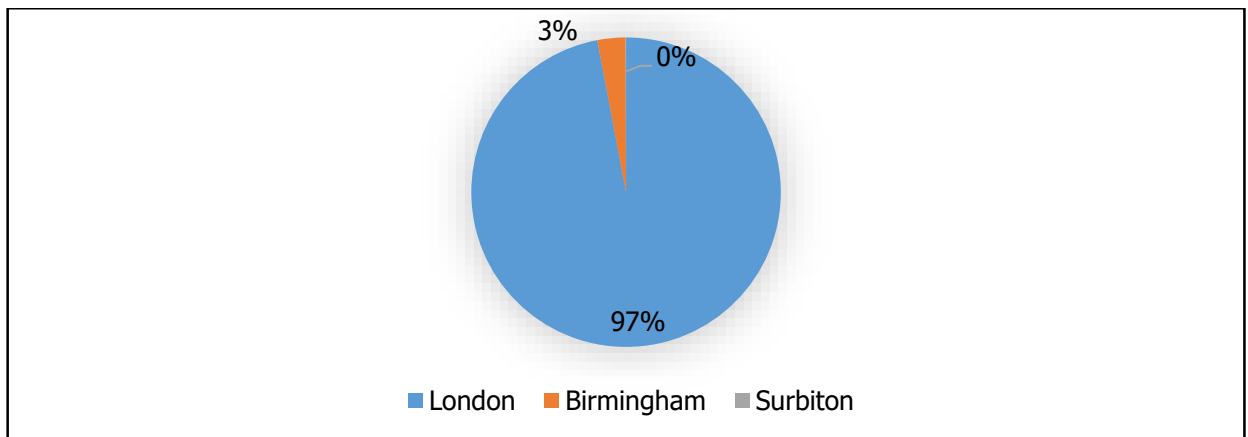
**Figure 25. Belgium imports in kg % 2015**



Source: Own computation based on SICEX database.

**The United Kingdom:** The imports were done by importers from this country, and the total amount was 7% (1,095,959.45 kg). The main regions can be seen in figure 26.

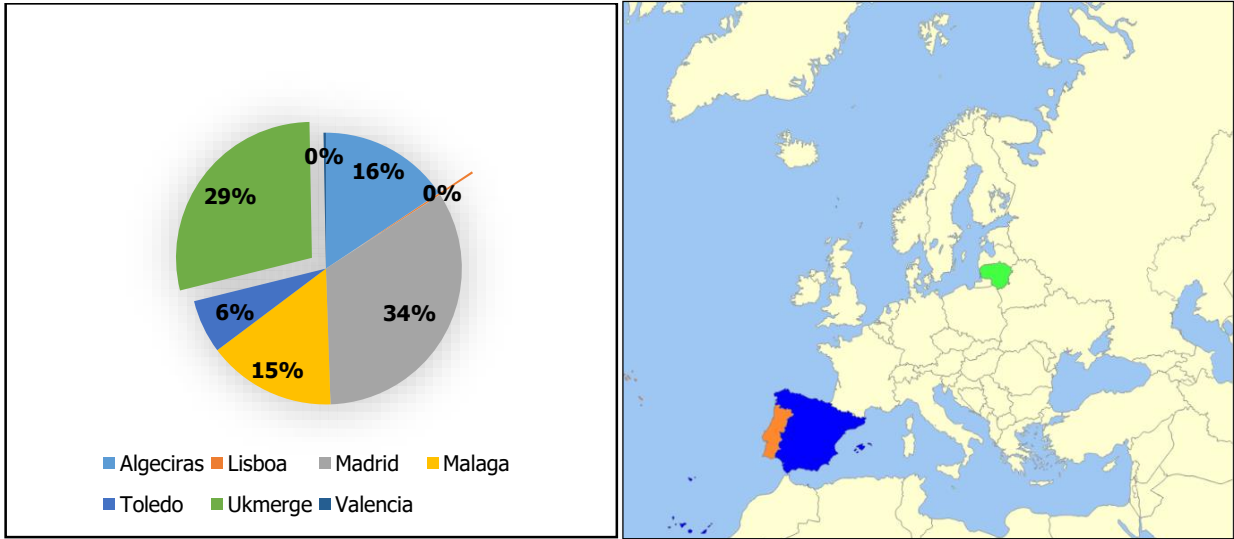
**Figure 26. The United Kingdom imports in kg % 2015**



Source: Own computation based on SICEX database.

**Spain:** Spain imported 4% (667,056.63 kg). From this total amount 71% was done by Spanish importers and 29% was done by a Lithuanian importer. The main regions can be seen in figure 27.

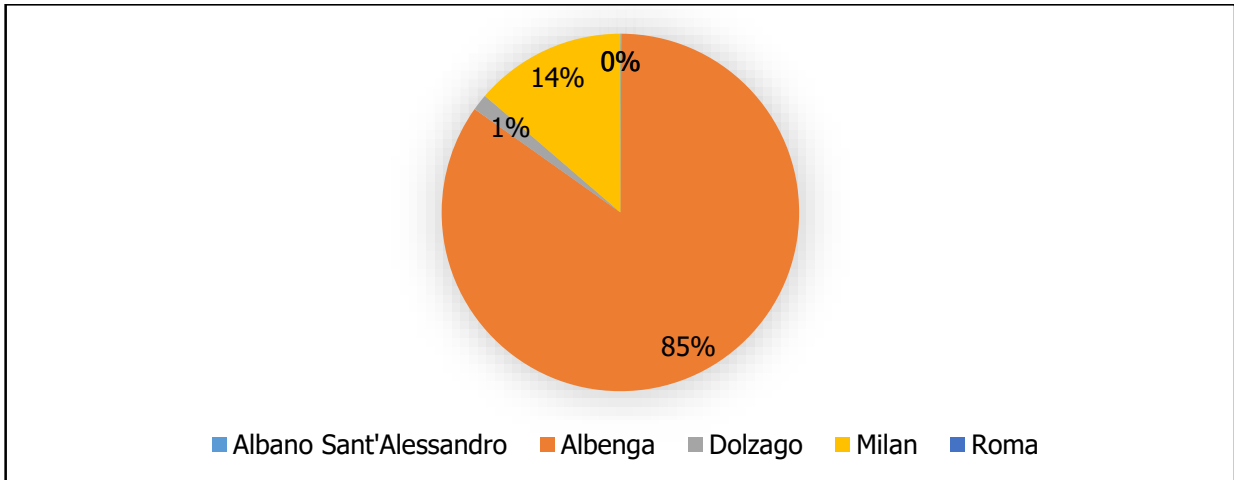
**Figure 27. Spain imports in kg % 2015**



Source: Own computation based on SICEX database.

**Italy:** Italy imported 3% (530,233.20 kg), and it was done by Italian importers. The main regions can be seen in figure 28.

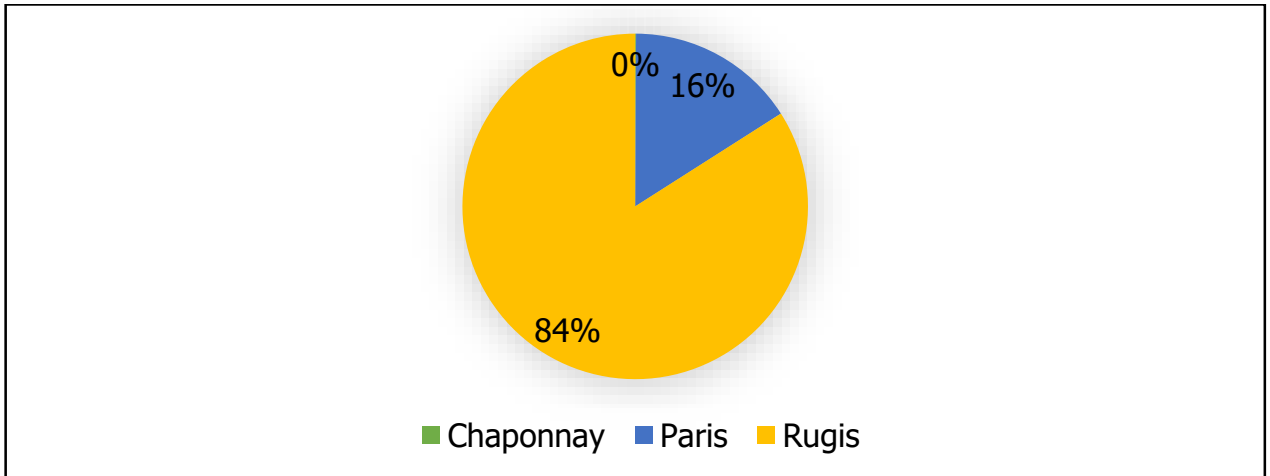
**Figure 28. Italy imports in kg % 2015**



Source: Own computation based on SICEX database.

**France:** The amount importers was 3% (487,098.00 kg) all done by French importers. In this case, the main regions in charge can be seen in figure 29.

**Figure 29. France imports in kg % 2015**

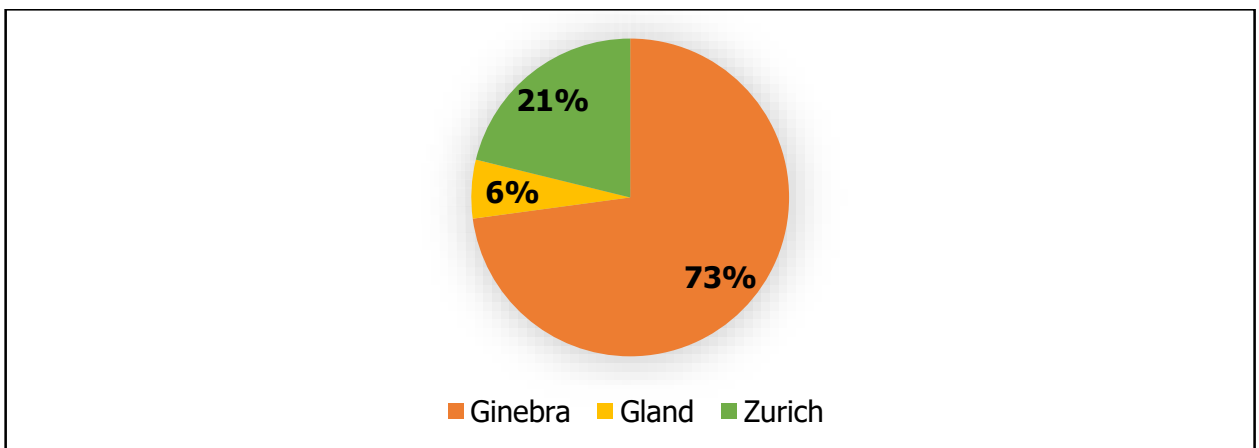


Source: Own computation based on SICEX database.

**Ireland:** Ireland imported so few that calculating the percentage it counts as 0% (9,303.22 kg). All was imported by importers established in Dublin.

**Switzerland:** Switzerland imported 5,838.19 kg, representing 0%, and the responsible were importers established in this country. The regions can be seen in figure 30.

**Figure 30. Switzerland imports in kg % 2015**



Source: Own computation based on SICEX database.



**Portugal:** Portugal imported 0% (4,240.50 kg) done by importers established in Lisbon.

**Norway:** Norway imported so few, 0% (39.00 kg) done by importers in Oslo.

**Table 4. Comparison EU imports through The Netherlands in kg 2015**

<b>COUNTRIES</b>	<b>NET WEIGHT IN KG</b>
<b>Germany</b>	1,494,644.77 kg
Through Belgium	614,242.4 kg
Through The Netherlands	100,267.2 kg
<b>Belgium</b>	646,457.28 kg
Through The Netherlands	95,690.92 kg
<b>The United Kingdom</b>	1,095,959.45 kg
Through The Netherlands	144,524.92 kg
<b>Spain</b>	474,608.63 kg
Through The Netherlands	190,930.05 kg
<b>Italy</b>	530,233.20 kg
Through The Netherlands	52,600.32 kg
<b>France</b>	487,098.00 kg
Through The Netherlands	203,110 kg
<b>Ireland</b>	9,303.22 kg
Through The Netherlands	21,194.00 kg
<b>Switzerland</b>	5,838.19
Through The Netherlands	60,531.00

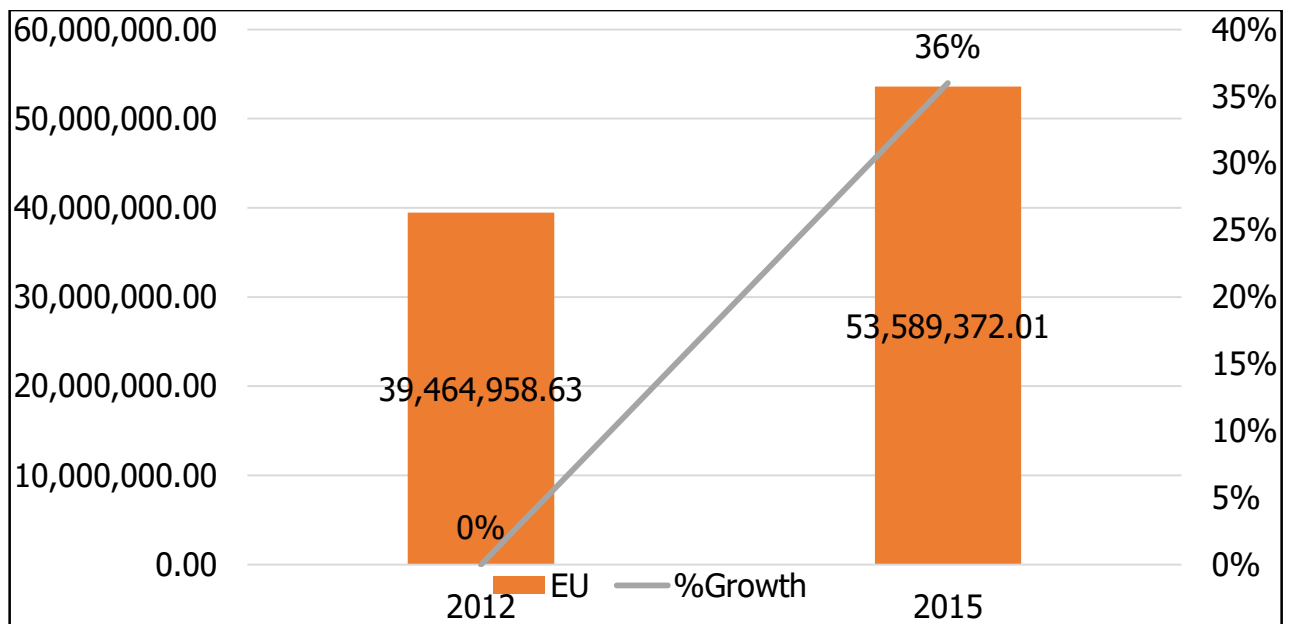
Source: Own computation based on SICEX database.

In Table 4 the comparison EU imports through The Netherlands shows that Germany, Belgium, The United Kingdom, Spain, Italy and France are more efficient importing through their countries, but they still import through The Netherlands, and it can be because of shipping connections. Meanwhile, Ireland and Switzerland import more through The Netherlands rather than their countries.

## CONCLUSIONS

Colombia has a strategic location right on the Equator that it is a strength for producing fruits. Thanks to the FTA that came into force in 2013 it was analyzed that the agreement increased the exports to the EU 36% in 2015, as it can be seen in figure 31. The EU is the leading economic group for exporting the selected fruits, more than the US and the rest of the world.

**Figure 31. Colombian exports before and after FTA with the EU in FOB \$USD 2012-2015**



Source: Own computation based on SICEX database.

Regarding the production, five new departments in 2015 started producing (Magdalena, Atlántico, Norte de Santander, Caldas, and Risaralda). Overall, the production in 2015 increased 7,299,757.26.00 kg (76%). In 2015, the leading departments were Cundinamarca producing Golden Berry, Purple passion fruit, and

Melon, meanwhile Avocado was Antioquia and Tahiti Lime was Santander. The situation, in general, is positive.

The leading fruits during the four years analysis have been in order Golden Berry, Purple Passion fruit, Avocado, Tahiti Lime, and Melon. Purple passionfruit has increased 47%, Avocado has 100% and Tahiti lime 90% though Golden berry and Melon have decreased their exports in 2015 (-24% and -959%) the group of fruits overall has increased. Some fruits are declining their exports because of reasons that perhaps can be competitors or lack of proper infrastructure of the country.

The type of cargo leading the exports is marine, which increased 48% in 2015. Also, air cargo has had an important participation. It surprisingly increased 24%, in 2015, showing an increasing tendency as well.

The main cities leading the fruit departing in 2015 were Cartagena, which accounted 55% and Santa Marta, which accounted 38% via marine.

Two EU group of countries are leading the imports, and the main one (I group) is led by The Netherlands, Germany, Belgium and The United Kingdom which imported in 2015 more than 1,000,000 FOB \$USD. The II group (Spain, France, Italy, Switzerland, Ireland, Sweden, Denmark, Portugal, Romania, Norway, and Austria) were chosen because they have imported less than 1,000,000.00 FOB \$USD. Some interesting facts about the second group are that Ireland started participating in 2014 and Norway started participating in 2015.

It can be said that the first EU group of countries have been outstanding because of their strong economics and their port development, which are considered in the top-10 within the EU. The Netherlands has been a "hub" importing the fruits.

Regarding The Netherlands imports, it can be summarized that 11 EU countries imported through this country, besides Curaçao, Egypt, and Russia. Though Germany, Belgium, The United Kingdom, Spain, Italy and France imported directly more amounts of fruit, they also did through The Netherlands. On the other hand, though Ireland and Switzerland imported directly, the biggest amount was done through The Netherlands.

This can be explained perhaps, because of shipping companies that has better connections with The Netherlands and that regarding costs and time are beneficial for the importers.

To conclude it can be said that the FTA has been advantageous to the employment of Colombia, because of their exports that have been reflected in more money for producers and exporters involved in the trade of fruits. Nevertheless, Colombia agriculture sector is at present facing problems such as lack of infrastructure and proper value chains that are affecting the effectiveness of the fruit production and it can be assumed that this can be one of the reasons why fruits such as Golden Berry and Melon started decreasing their exports and production.

## **RECOMMENDATIONS**

The recommendations for Colombia as one of the main fruit exporters to the EU is that it still has many potentials to increase the fruit exports because consumers of the EU28 have shown interest in trying new flavors and are willing to pay for quality to have a healthy lifestyle. It is important that the Government of Colombia keeps advertising and still more about the fruits in Latin events, business matchmaking, and trade fairs and so on to promote them for the EU consumers.

As it could have been seen in the analytical part, though The Netherlands has the main proportion of fruit imports, it is not known exactly where the fruit goes after and where it is finally consumed. The fruits can be re-exported to other countries within the EU which have alliances with those Dutch importers. It is recommended to develop a further research to know where the fruit is finally consumed.

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## APPENDIX

**Table 5. Colombia fruit exports to the EU in kg and FOB \$USD values  
2012**

<b>FRUITS/COUNTRY</b>	<b>NET WEIGHT (KG)</b>	<b>FOB (\$USD)</b>
<b>AVOCADO HASS</b>	<b>368.16</b>	<b>246.17</b>
Denmark	26.16	72.17
Germany	23.00	21.00
The Netherlands	319.00	153.00
<b>GOLDEN BERRY</b>	<b>6,206,791.79</b>	<b>27,656,984.93</b>
France	90,074.82	386,206.19
Germany	1,583,819.20	7,156,831.15
Italy	10,713.25	62,017.14
Portugal	390.00	2,092.51
Spain	10,223.43	39,878.74
Sweden	11,007.10	53,155.00
Switzerland	38,039.90	97,912.00
The Netherlands	4,428,755.69	19,718,154.72
The United Kingdom	33,768.40	140,737.48
<b>TAHITI LIME</b>	<b>109,476.00</b>	<b>145,020.98</b>
Germany	36.00	36.00
The Netherlands	84,480.00	102,552.98
The United Kingdom	24,960.00	42,432.00
<b>MELON</b>	<b>658,280.50</b>	<b>550,848.87</b>
Germany	3,064.50	12,852.60
Romania	60.00	153.00
Spain	574,300.00	474,657.27
Sweden	204.00	461.30
The Netherlands	80,652.00	62,724.70
<b>PURPLE PASSION FRUIT</b>	<b>2,620,660.75</b>	<b>11,111,857.68</b>
Denmark	2,476.40	10,182.00
France	54,050.60	218,913.80
Germany	623,915.45	2,622,777.80
Italy	1,856.16	6,750.06
Portugal	1,524.50	4,955.56

Spain	8,561.01	37,445.53
Sweden	7,299.00	33,868.00
Switzerland	20,494.30	66,370.80
The Netherlands	1,857,365.91	7,953,830.62
The United Kingdom	43,117.42	156,763.51
<b>TOTAL</b>	<b>9,595,577.20</b>	<b>39,464,958.63</b>

Source: Own computation based on SICEX database.

**Table 6. Colombia fruit exports to the EU in kg and FOB \$USD values 2013**

<b>FRUIT/COUNTRY</b>	<b>NET WEIGHT (KG)</b>	<b>FOB (\$USD)</b>
<b>AVOCADO HASS</b>	<b>509,849.79</b>	<b>1,118,707.93</b>
France	18.29	15.00
Spain	7.50	1.01
The Netherlands	509,824.00	1,118,691.92
<b>GOLDEN BERRY</b>	<b>4,797,060.20</b>	<b>26,029,499.19</b>
Austria	2.06	2.00
Belgium	233,609.82	1,063,582.91
France	25,459.08	99,868.98
Germany	1,131,459.48	5,649,532.01
Italy	5,292.00	25,515.39
Portugal	255.00	1,320.00
Romania	5,178.00	30,230.31
Spain	13,972.20	53,312.56
Sweden	21,751.20	202,965.00
Switzerland	20,688.40	159,696.88
The Netherlands	3,320,242.34	18,630,282.89
The United Kingdom	19,150.62	113,190.26
<b>MELON</b>	<b>15,522.00</b>	<b>16,057.40</b>
Germany	282.00	674.40
The Netherlands	15,020.00	14,678.50
The United Kingdom	220.00	704.50
<b>PURPLE PASSION FRUIT</b>	<b>3,241,887.28</b>	<b>15,183,042.46</b>
Austria	4.00	2.00
Belgium	152,636.00	576,207.52
France	11,622.25	56,827.95
Germany	688,646.30	3,056,131.38
Italy	726.00	3,946.95

Portugal	1,010.00	2,137.56
Romania	36,591.00	15,806.34
Spain	11,613.39	44,914.56
Switzerland	41,089.00	163,861.81
The Netherlands	2,273,037.24	11,167,235.59
The united kingdom	24,912.10	95,970.80
<b>TAHITI LIME</b>	<b>246,866.71</b>	<b>323,838.83</b>
Belgium	21,384.00	26,608.92
France	13.71	10.00
Germany	24.00	18.00
Portugal	70,828.00	74,866.37
Spain	92,539.50	131,258.74
The Netherlands	62,037.00	91,049.80
The United kingdom	40.50	27.00
<b>TOTAL</b>	<b>8,811,185.98</b>	<b>42,671,145.81</b>

Source: Own computation based on SICEX database.

**Table 7. Colombia fruit exports to the EU in kg and FOB \$USD values 2014.**

<b>FRUIT/COUNTRY</b>	<b>NET WEIGHT (KG)</b>	<b>FOB (\$USD)</b>
<b>AVOCADO HASS</b>	<b>1,717,125.87</b>	<b>3,514,942.38</b>
France	43,998.09	68,542.14
Germany	24.00	8.00
Italy	84.00	229.60
Spain	80,370.00	147,321.45
The Netherlands	1,369,057.78	2,840,146.97
The United Kingdom	223,592.00	458,694.22
<b>GOLDEN BERRY</b>	<b>10,930,030.50</b>	<b>28,257,533.95</b>
Belgium	5,848,307.50	3,034,326.19
France	12,630.70	50,002.88
Germany	1,632,731.97	7,725,322.04
Ireland	2,071.50	7,265.45
Italy	7,422.09	48,809.95
Portugal	1,323.00	6,080.00
Spain	14,131.60	76,697.75
Switzerland	11,630.50	100,054.57
The Netherlands	3,231,792.23	17,161,470.42
The United Kingdom	167,989.41	47,504.70

<b>TAHITI LIME</b>	<b>479,353.00</b>	<b>629,865.62</b>
France	45,360.00	58,536.89
Italy	74,968.00	119,948.80
Spain	107,880.00	114,560.00
The Netherlands	205,048.00	277,929.93
The United Kingdom	46,097.00	58,890.00
<b>MELON</b>	<b>29,757.00</b>	<b>41,401.90</b>
Germany	402.00	1,125.60
The Netherlands	29,127.00	39,250.30
The United Kingdom	228.00	1,026.00
<b>PURPLE PASSION FRUIT</b>	<b>3,779,615.58</b>	<b>17,087,856.33</b>
Belgium	178,304.00	692,764.19
France	3,877.50	11,547.20
Germany	642,003.39	2,780,694.05
Ireland	1,500.00	6,430.09
Italy	4,335.00	21,806.04
Portugal	3,721.50	17,629.80
Spain	6,209.44	74,875.03
Switzerland	36,937.00	103,717.39
The Netherlands	2,859,077.30	13,190,734.65
The United Kingdom	43,650.45	187,657.89
<b>TOTAL</b>	<b>16,935,881.95</b>	<b>49,531,600.18</b>

Source: Own computation based on SICEX database.

**Table 8. Colombia fruit exports to the EU in kg and FOB \$USD values 2015.**

<b>FRUIT/COUNTRY</b>	<b>NET WEIGHT (KG)</b>	<b>FOB (\$USD)</b>
<b>AVOCADO HASS</b>	<b>4,793,076.67</b>	<b>8,793,771.02</b>
France	407,334.00	668,935.11
Italy	174.00	556.09
Spain	396,137.47	635,603.17
The Netherlands	3,195,653.20	5,882,062.85
The United Kingdom	793,778.00	1,606,613.80
<b>GOLDEN BERRY</b>	<b>5,451,576.35</b>	<b>22,350,596.64</b>
Belgium	975,215.08	3,616,299.44
France	14,216.20	70,168.18
Germany	1,221,472.09	4,461,051.48
Ireland	4,162.50	11,408.17

Italy	14,258.70	75,792.70
Norway	9.00	36.95
Portugal	1,432.50	7,408.00
Spain	10,460.00	38,694.34
Switzerland	5,832.19	57,354.99
The Netherlands	3,186,696.21	13,934,081.46
The United Kingdom	17,821.88	78,300.93
<b>MELON</b>	<b>11,129.52</b>	<b>51,551.66</b>
Germany	441.00	1,154.50
The Netherlands	10,354.00	48,329.40
The United Kingdom	334.52	2,067.76
<b>PURPLE PASSION FRUIT</b>	<b>5,353,634.42</b>	<b>20,879,986.07</b>
Belgium	285,484.60	1,029,864.44
France	65,547.80	208,771.89
Germany	272,731.68	1,059,882.24
Ireland	5,230.72	18,658.96
Italy	27,674.00	116,814.22
Norway	30.00	128.66
Portugal	2,808.00	11,580.28
Spain	9,063.16	39,152.88
Switzerland	6.00	52.00
The Netherlands	4,623,133.41	18,138,490.09
The United Kingdom	61,925.05	256,590.41
<b>TAHITI LIME</b>	<b>1,285,917.50</b>	<b>1,513,466.62</b>
Italy	488,126.50	598,912.34
Spain	251,396.00	260,274.25
The Netherlands	324,295.00	392,028.03
The United Kingdom	222,100.00	262,252.00
<b>TOTAL</b>	<b>16,895,334.46</b>	<b>53,589,372.01</b>

Source: Own computation based on SICEX database.

**Table 9. Departing city of fruits and Net weight kg 2015**

<b>DEPARTING CITY/FRUIT</b>	<b>NET WEIGHT (KG)</b>
<b>BOGOTA</b>	<b>510,206.03</b>
<b>AVOCADO HASS</b>	<b>505.00</b>
<b>AIR</b>	505.00
Italy	174.00
The Netherlands	331.00

<b>GOLDEN BERRY</b>	291,175.95
<b>AIR</b>	291,175.95
Belgium	6,119.52
France	14,216.20
Germany	103,680.95
Ireland	4,162.50
Italy	7,962.30
Norway	9.00
Portugal	1,432.50
Spain	10,460.00
Switzerland	5,484.19
The Netherlands	135,823.51
The United Kingdom	1,825.28
<b>MELON</b>	11,129.52
<b>AIR</b>	11,129.52
Germany	441.00
The Netherlands	10,354.00
The United Kingdom	334.52
<b>PURPLE PASSION FRUIT</b>	207,395.56
<b>AIR</b>	207,395.56
Belgium	8,085.00
France	65,547.80
Germany	73,483.68
Ireland	5,230.72
Italy	1,700.00
Norway	30.00
Portugal	2,808.00
Spain	9,063.16
Switzerland	6.00
The Netherlands	40,211.15
The United Kingdom	1,230.05
<b>CALI</b>	135.00
<b>GOLDEN BERRY</b>	135.00
<b>AIR</b>	135.00
The Netherlands	135.00
<b>CARTAGENA</b>	9,302,708.12
<b>AVOCADO HASS</b>	4,072,144.97
<b>MARINE</b>	4,072,144.97



France	364,710.00
Spain	119,844.77
The Netherlands	2,793,812.20
The United Kingdom	793,778.00
<b>GOLDEN BERRY</b>	1,857,709.29
<b>MARINE</b>	1,857,709.29
Belgium	171,960.40
Germany	29,354.00
Switzerland	348.00
The Netherlands	1,655,767.53
The United Kingdom	279.36
<b>PURPLE PASSION FRUIT</b>	2,870,258.86
<b>MARINE</b>	2,870,258.86
Belgium	27,072.00
Germany	32,582.00
The Netherlands	2,810,524.86
The United Kingdom	80.00
<b>TAHITI LIME</b>	502,595.00
<b>MARINE</b>	502,595.00
Spain	42,600.00
The Netherlands	237,895.00
The United Kingdom	222,100.00
<b>MEDELLIN</b>	10.00
<b>AVOCADO HASS</b>	10.00
<b>AIR</b>	10.00
Spain	10.00
<b>SANTA MARTA</b>	6,341,294.81
<b>AVOCADO HASS</b>	676,790.70
<b>MARINE</b>	676,790.70
France	42,624.00
Spain	232,656.70
The Netherlands	401,510.00
<b>GOLDEN BERRY</b>	3,302,556.11
<b>MARINE</b>	3,302,556.11
Belgium	797,135.16
Germany	1,088,437.14
Italy	6,296.40
The Netherlands	1,394,970.17

The United Kingdom	15,717.24
<b>PURPLE PASSION FRUIT</b>	2,275,548.00
<b>MARINE</b>	2,275,548.00
Belgium	250,327.60
Germany	166,666.00
Italy	25,542.00
The Netherlands	1,772,397.40
The United Kingdom	60,615.00
<b>TAHITI LIME</b>	86,400.00
<b>MARINE</b>	86,400.00
The Netherlands	86,400.00
<b>TURBO</b>	<b>740,980.50</b>
<b>AVOCADO HASS</b>	43,626.00
<b>MARINE</b>	43,626.00
Spain	43,626.00
<b>PURPLE PASSION FRUIT</b>	432.00
<b>MARINE</b>	432.00
Italy	432.00
<b>TAHITI LIME</b>	696,922.50
<b>MARINE</b>	696,922.50
Italy	488,126.50
Spain	208,796.00
<b>TOTAL</b>	<b>16,895,334.46</b>

Source: Own computation based on SICEX database.