



# **FTA with European Union finding opportunities for the agricultural sector in the exotic fruit line in Colombia.**

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ESUMER UNIVERSITY INSTITUTION

Faculty of International Studies

Medellín, Colombia

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## **Gratefulness**

Popular Adagio

“If you do not know where you are going, any way is good”.

### **Acknowledgments to my Coordinator María Camila Marín**

She teaches me how important is planning and focus our aims to reach of goals, hence, they become achievable. Some occasions, it is possible to take the wrong way, however if we were writing we could check our notes to align in the personal, work and spiritual field.

### **Acknowledgments to my mother, brothers and Sandra Vera**

Their support helps me to become in true an achievement on my evolutionary scale to consolidate myself as a person and project my new goals. Always reflecting my values with my performance.

## **Abstract:**

The research is focused on finding opportunities for the agricultural sector in the exotic fruit line taking advantage of the Free Trade Agreement FTA between Colombia and the European Union (EU). It starts with a journey through the country's last century history in terms of international trade, politics and industry, besides, a research carried out by other authors and prioritized in 4 approaches to strengthen the agricultural development.

On one hand, it performs an analysis of the value chain, dynamics of each process and dependence among the actors; and on the other hand, the current situation of the country's infrastructure, the main projects under implementation and the current government's policy approach to support the field transformation will be mentioned.

Finally, the EU barriers will be described in detail to understand them clearly. So that, all of this turns into an integral system full of benefits and with great potential for this research that concerns other topics such as environmental care and social responsibility as components of success.

## Keywords:

**Benefit:** A benefit is something good that is made or received. The term is also used as a synonym of utility or advantage. It is the profit obtained by an actor from an economic process and calculated as the total income minus the total costs. (Pérez Porto & Gardey, 2014)

**Company:** A company is a socioeconomic unit, made up by human, material and technical elements, whose goal is to obtain profits through its participation in the goods and services market. Thus, it makes use of the productive factors (labor, land and capital). (Pérez Porto, 2008)

**Exotic fruits:** From Latin exoticus, that comes from the Greek word. The concept of exotic refers to every pilgrim of different nationality to observes or to foreign objects or individuals. (Pérez Porto & Gardey, 2012)

During the investigation, this term shall refer to products of tariff heading 08.10 Other fruit or other fresh fruit; Including all the subheadings. Exotic is assigned to this category because the purpose of the research is to explore the opportunities of Colombian typical fruits in the European market that recognizes them as exotic fruits.

**Globalization:** Globalization is a historical process of global integration in the political, economic, social, cultural and technological fields, which has made the

world an increasingly interconnected place in a global village. (significados.com, 2017)

**Logistics:** From English logistics. Logistics is the set of means and methods that allow to carry out the organization of a company or a service, especially distribution. It is said that logistics is the bridge or the link between production and market; the origin of logistics is found in the military field, where the organization tended to take care of the movement and the maintenance of the troops in campaign. In times of war, the efficiency to store and transport the elements was vital, otherwise soldiers may suffer from the scarcity of means to deal with the harshness of the fighting. Therefore, from these experiences, business logistics was responsible for studying how to set up goods and services in the right place, at the right time and under the right conditions. This allows companies to accomplish the requirements of their customers and obtain the greatest possible profitability. (Pérez Porto, 2009)

**Value chain:** It is known as a value chain to a theoretical concept that describes the way in which the actions and activities of a company are developed. Based on the definition of chain, it is possible to find different links in it that take part in an economic process: it starts with the raw material and comes up to the distribution of the finished product, in each link, value is added in competitive terms and it is understood as the amount that consumers are willing to pay for a particular product or service. (Pérez Porto & Merino, 2012)

# Content

	<b><u>Page</u></b>
Andrés Felipe Cano Cano	1
Andrés Felipe Cano Cano	2
1. PROJECT FORMULATION	14
1.1 Background	14
1.1.1 State of the Art	18
1.2 Problem approach	19
1.3 Justification	21
1.4 Objectives	23
1.4.1 <i>General Objective</i>	23
1.4.2 <i>Specific Objectives</i>	23
1.5 Methodological framework	23
1.5.1 <i>Method</i>	24
1.5.2 <i>Methodology</i>	25
1.6 Achieve	26
2. PROJECT EXECUTION	27
3. FINDINGS	57
4. CONCLUSIONS AND RECOMMENDATIONS	61
4.1 Conclusions	61
4.2 Recommendations	62

## Figures List

	<b><u>Page</u></b>
<b>Figure 1:</b> Economic Outlook in Colombia	29
<b>Figure 2:</b> Total Exports and Imports from Colombia	30
<b>Figure 3:</b> Trade Balance Between Colombia and the UE	31
<b>Figure 4:</b> Imports and Exports from Agricultural sector	32
<b>Figure 5:</b> Value Chain of Exotic Fruit Line in Colombia	37
<b>Figure 6:</b> Fourth Generation Road Concessions	41
<b>Figure 7:</b> Departmental focus for Sowing Fruit Crops	50



## Tables List

	<b><u>Page</u></b>
<b>Table 1:</b> Unemployment Rate (1964 – 1992)	15
<b>Table 2:</b> Colombian GDP (1960 -1988)	15
<b>Table 3:</b> Productivity Growth Rate (1930 - 1990)	15

## Symbols and Abbreviations List

### Symbols List

€.	Euro currency
\$ COL	Colombian peso currency
\$ US	Dollar currency

### Abbreviations List

**FTA:** Free Trade Agreement.

**EU** European Union

**SMEs** Small and medium-sized enterprises

**LAC** Latin America and the Caribbean

**WTO** World Trade Organization

**UN** The United Nation Organization

**ICC** International Chamber of Commerce

**WBG** World Bank Group

**IMF** The International Monetary Fund

**CORPOICA** Colombian Corporation of Agricultural Research *by their initial in Spanish*

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**FINAGRO** Fund for the financing of the agricultural sector  
**CENI** Agricultural Sector Research and Technological Development Centers  
**UPRA** Rural Agricultural Planning Unit  
**ICA** Colombian Agricultural Institute *by their initial in Spanish*  
**MINCIT** Ministry of Commerce Industry and Tourism  
**CIAT** International Center for Tropical Agriculture  
**SGP-Plus** Generalized System of Preferences  
**MSI** Import Substitution Model *by their initials in Spanish*  
**DFI** International Physical Distribution *by their initials in Spanish*  
**FBK** Gross Capital Formation *by their initial in Spanish*  
**I+D** Investigation and Development  
**ANI** National Infrastructure Agency *by their initial in Spanish*  
**PND** National Development Plan *by their initial in Spanish*  
**RASFF** Rapid Alert System for Food and Feed  
**TRACES** Trade Control and Expert System  
**FVO** Food and Veterinary Office  
**MSF** Sanitary and phytosanitary measures  
**TBT** Technical Barriers to Trade  
**TEU** Twenty-foot Equivalent Unit  
**FEU** Forty-foot Equivalent Unit  
**HC** High Cube

## Introduction

By this thesis way, my intention is to give readers more than an investigation, it is to give a knowledge tool applicable to their business in the international field, available to businessmen who are or wish to enter into international trade.

As it is well known, nowadays the world cross by an Internationalization boom of products, customs, fashions, flavors and more. Together by an accelerated development in the communications, technology and transport that does not stop growing, this conjuncture gives a golden opportunity for organizations in emerging countries. If these organizations have information about the benefit of their comparative advantages, they would improve their productive processes and they would also have access to unexplored markets.

In this work, it is intended to perform an x-ray to the value chain for the agricultural sector organizations in the exotic fruit line in Colombia, by this way to base vital aspects for the economic growth and sustainable development in the agro, allowing business leaders to forge strategies aligned with success in the European market.

In 2013, Colombia signed the Free Trade Agreement (FTA) with the European Union, benefiting largely from the release of tariffs on domestic products, even so there would be another series of barriers that could cause significant difficulties for those who dare to venture into this world, as a result Andres Cano Cano author of this thesis, is committed to show the benefits when exporting to the European Union

(EU) and the cares that must be taken to do so. Through this thesis, the subject will be exposed with a friendly language and will follow this lineament of showing the benefits; it will also help to boost a highly-social important sector in Colombia like the agro.

As it was mentioned in the popular philosophical adage "Knowledge is power", and considering knowledge so valuable, the question that arises is: How to access to it? I wish the answer were evident; universities are one way, everyone who participated in the training faculty has the commitment to transmit this knowledge to people who are involved in the field so they should not allow to continue the bad habit of test and failure. This and all research must become the journal of the leaders, since they are channels of truthful and current information in cognitive processes and thus rise opportunities not so obvious in the medium.

This tool elaborates an arduous tracking of the opportunities immersed in the development plan of the Colombian government focused to the agriculture area, so that, point out clearly, precisely and without the political protocol the kindness of the programs that are moving forward and how to have access to them. As I mentioned above and I remark it, information is power and ignorance is no longer winning; The goal of this "tool" is the opportunities, " Not to be involved represents no change, but, in the opposite, to catch them is to transcend".

# 1.PROJECT FORMULATION

## 1.1 Background

In view of the recent participation of the Colombian state in economic integration processes, it is necessary to mention relevant aspects of history in the international political area.

Colombia acted under the Import Substitution Model (Modelo de Sustitución de importaciones o MSI in Spanish) during most of the twentieth century, which it is to favor local industry by replacing imports of domestic products; This at its beginning, seemed to be a good alternative to boost the economic development of the country as well as implementing support to nascent industry with subsidies for exports; besides, tariffs and para-tariff measures were imposed on imports of products, only with the exception of the machinery and raw materials, in order to favor the local industry.

In contrast to what was expected, an unfavorable cultural effect arose among the country's businessmen, in which investment, innovation and technical progress were slowed down, due to all the benefits that the highly protectionist state granted to them; resulting in low quality products, uncompetitive prices, delayed delivery and poor service in the domestic industry. (Maya Muñoz, 1992, p. 48)

**Table 1: Unemployment Rate (1964 – 1992)**

Cuadro 1			
<i>Año</i>	<i>Tasa de desempleo</i>	<i>Año (Marzo)</i>	<i>Tasa de desempleo</i>
1964	6.8%	1988	12.7
1967	12.3	1989	10.9
1974	10.4	1990	9.7
1980	9.7	1991	10.5
1985	13.9	1992	10.7

Source: (Maya Muñoz, 1992, p. 49)

**Table 2: Colombian GDP (1960 -1988)**

Cuadro 2		
<i>Período</i>	<i>Tasa PIB %</i>	<i>Tasa PIB/Per cápita</i>
1960-73	5.9	3.0
1973-80	4.8	2.8
1980-88	2.7	2.7

Source: (Maya Muñoz, 1992, p. 50)

**Table 3: Productivity Growth Rate (1930 - 1990)**

Cuadro 3	
<i>Período</i>	<i>Tasa crecimiento. Productividad/año</i>
1930-50	+ 2.8%
1950-70	+ 1.4%
1970-80	+ 0.8%
1980-90	— 0.6%

Source: (Maya Muñoz, 1992, p. 50)

Table 1 shows that the unemployment rate rises as a result of this policy, going from 6.8% in 1964 to 13.9% in 1985. The highest point in Table 2, GDP declined from 5.9% in 1960 to 2.7% by the end of 1988 and as a result more alarming measures because the state invested so much capital, Table 3 shows the indicator of the Rate of Productivity growth, which between 1930 -1950 was + 2.8% and fell in the 1980s to -0.6%.

Based on the above statistic, the MSI model contracts the agricultural sector since it made it more expensive to produce industrial supplies for the production of derivatives, due to the highly inefficient local industry, but also the high taxes imposed on agriculture that give as a result, unprofitable final prices in the international market.

In general, armed subversion, narco-business and "the economy of rummage" have been the paths chosen by many of our fellow citizens facing the failure of an economic and social model that was depleted and set them aside. And this economic and social marginalization of a large population sector has ended up to reduce the State's capacity for governance over civil society, eroding social cohesion, as well as replacing the ethos of labor with the ethos of easy money and at any cost. (Maya Muñoz, 1992, p. 52)

This scenario required a change as looking for the internationalization of markets. In 1990 with the arrival of President César Gaviria Trujillo and the customs opening with the program of modernization of the Colombian economy, a process of transformation is initiated with the gradual dismantling of tariffs in a lapse of three years and the elimination of the previous license, these events caused the bankruptcy of many companies, even so it is not correct to say that it was an economic crisis because it was the precedent for a new nation immersed in globalization, seeking to stimulate industrial development, progress and technical



change as well. Through free competition, the development of competitive advantages, more efficient use of its resources, and economies of scale, gradual liberalization of commercial, financial, and capital markets was scheduled.

The new system based on the free market "neo-liberalism" consists of several guidelines:

- Minimizing State intervention in the economy because the State should not exert control over the private and in this way the market is energized on its own.
- Phasing out tariffs and have to animosity with free trade agreements.
- Privatizing public companies.
- Stimulating foreign investment.

The State seeks to improve employment conditions, aggregate demand on products and outsource uncompetitive costs; as a result, many companies go bankrupt and those that have managed to adapt to the new environment channel focus their efforts to a globalized world, however competitiveness at the international level is based on intensive products in the application of knowledge, a challenge to achieve for national organizations.

In the process of international competition, competitiveness is, both at the level of the real exchange rate and the technological productivity with lower unit costs, high quality and also prompt delivery, the variable that determines the success or failure in it. In this sense, sectoral policies of credit, public expenditure, research and technological development and so on, as well as those of macroeconomic level, such as exchange management, fiscal and monetary policy, etc., are fundamental in the success or failure of the agricultural sector in the process of commercial opening that the country has undertaken. (Maya Muñoz, 1992, p. 60)

At present, Colombia has more than 16 trade agreements and has negotiations with 4 more countries (Ministry of Industry and Tourism, 2017); This research aims to analyze the effects and opportunities for the agricultural sector in the exotic fruits line.

### **1.1.1 State of the Art**

In Colombia's logistical profile research a vision towards the strategic improvement of national and international operations (Santos Hernández, 2015) It presents a clear idea of how developing countries as Colombia is not deepening on concepts such as lead time, lean manufacturing, off shoring, supply chain and therefore companies have generated poor logistical management of the agro-industrial sector.

The majority of Small and Medium-sized enterprises SME's have not been able to identify the correct use of the value chain and in accordance with this reality in a globalized environment, the speed and growth of the economies is not waited, so a specialization in the competitiveness of companies must be carried out.

In addition, in response to this growth, state intervention is required in the road infrastructure that allows companies connecting with the outlet points for carry their goods to international destinations.

In another research by Friedrich Ebert Stiftung in Colombia, Fescol, (Reina & Oviedo, 2011) They consider several disciplines on the regulations of trade in goods and services, as well as the establishment of the conditions in the FTA between Colombia and the European Union, these disciplines represent a substantial improvement over the conditions of the Generalized System of Preferences (SGP-plus) which currently allow for preferential access to a set of Colombian products in the European market

The negotiated agreement represents an improvement as far as it expands the universe of products to tariff liberalization, it also allows to reduce the uncertainty inherent in the unilaterality of the GSP-plus and expands in several aspects beyond the simple reduction or elimination of tariffs for Trade in goods.

There is no further evidence of similar research against the fact this signing of the agreement was very recent in 2013, so the research is provided as an instrument of vital importance to the sector in mention with the purpose of shine the benefits obtained and opportunities of the FTA between Colombia and the EU.

## **1.2 Problem approach**

Colombia and the European Union seek with the new treaty mutual benefits for the nations, however the EU is a power and supports emerging economies to achieve greater internationalization as it is Colombia's case, which one is actually characterized as a moderate outward country during the last 2 decades. This period is relatively short, even so, it has boosted negotiation of several FTA's by promoting the country's economic growth and increasing workers' remuneration as well, to stop the delay in which it was immersed during the period the MSI policy prevailed.

This treaty presents great opportunities inasmuch as it has a partial scope for product liberalization and some vulnerable sectors such as rice, corn, pork and also poultry are protected, in turn, it opens the new market for other less sensitive sectors of agriculture as banana, sugar, beef, flowers, coffee, palm oil, tobacco, fruit and vegetables.

The largest expansion sectors for exports are:

1. Agriculture (raw animal and vegetable products)
2. Agro-Industrial (products and miscellaneous edible products)

3. Agro-industrial (sugars, sugar preparations and honey)
4. Manufacturers (paperboard, paper and its products, perfumery, plastics and leathers).

The largest expansion sectors for imports are:

1. Machinery and equipment
2. Vehicles
3. Chemical Products
4. Iron and Steel (Reina & Oviedo, 2011, p. 1)

Exposed the before idea, this study will focus on the first line, about, the agriculture for export of raw plant products, especially those known as exotic fruits, belonging to the tariff heading 08.10. And their sub-matches.

An important aspect to promote the possible success of Colombian entrepreneurs in foreign trade is to determine efficiency in value chains, the applied logistics and the available resources to carry out the activity in companies of the agricultural sector in exotic fruits line, determinant aspects to stimulate the sector.

The thesis aims to identify what characteristics and projects are ahead about the road mesh, capacity installed within national ports and airports for the movement of goods, performance of customs checks on documentation or inspections and phytosanitary measures related to the line of exotic fruits in Colombia. This will allow the entrepreneurs learn about it with a less technical language making adaptations of improvement to their distribution chains. In addition, the European market is very demanding about its normativity in measures of traceability of goods, labelling and sources of origin, among others; thus the EU created nontariff barriers for external countries. It is also important to mention the comparative and competitive advantages in Colombia that could increase the companies' synergy to consolidate forces in the sector and detecting the government programs in its favor.

The questions that problematizes the study object consists about identifying the determinants factors to guarantee the process of export in the agricultural sector companies of the exotic fruits line, and thus to benefit with the FTA between the European Union and Colombia, the following questions will establish a sequence of issues that will be resolved in this research and frame the objectives of this project:

1. How does it work of productive chain in the agricultural sector companies of the exotic fruit line in Colombia?
2. What are the characteristics and logistical infrastructure projects that Colombia is advanced to allow transporting goods toward the European continent?
3. What are the European community restrictions to entry the exotic fruits?
4. What are the State programs to support the agricultural sector in Colombia?

### **1.3 Justification**

This research aims to provide information on the benefits and important aspects to be taken into account with the FTA between the European Union and Colombia, providing tools to entrepreneurs in the agricultural sector specifically for the exotic fruits line to target their products to the European market and invigorating the economy outdoors with greater strength.

In addition, checking the current processes of the value chain and distribution in the companies to the sector mentioned, also taking into account the support of the government agricultural programs. It will be pointed out some of the most relevant State proposals focused to the field, and mentioning the channels for the collection a real and truthful information; many times people do not take advantage of opportunities by ignorance.

### **Theoretical Justification**

This research will be performed with the purpose of raising clear and accurate information that allows actors to generate ideas and improvements in the processes of the exotic fruit sector, in addition, communicate the regulations and parameters required by the EU to allow access to these markets through an effective management of international physical distribution (Distribución Física Internacional o DFI in Spanish) and prevent the interfaces from turning into depression costs for their businesses

### **Social Justification**

Immersed in this plan, the FTA with the European Union should not be became in one more of the agreements signed by Colombia, otherwise wanted with this research to maximize its advantages with the contribution of expert's ideas on the subject.

Heading down international business in a corporate social responsibility way, oriented in a vulnerable sector of priority for our society, like agriculture; Likewise create culture of exigency and high standards of quality with sustainable development, generating a social environment of greater impact, that transcends to the family entities and interpersonal relations in the Colombian society

### **Personal Justification**

Immersed in the globalization view and technological changes in the new millennium, the author advances his studies in the International business career and identifies with the theme of nature, sustainable development and environmental problems whereby the world crosses at present and it finds opportunity to carry out its research in the productive models for the exotic fruits sector in Colombia taking advantage to the current FTA with the EU and to the new model of opening in the country.

## **1.4 Objectives**

### **1.4.1 General Objective**

Review the opportunities of the agricultural sector in the exotic fruits line to take advantage of the FTA between the European Union and Colombia in the medium term.

### **1.4.2 Specific Objectives**

- Showing performance of the agricultural sector production chain in the exotic fruits line.
- Identifying relevant aspects of the logistics infrastructure and projects ahead in Colombia to allow the goods transport toward the EU.
- Identifying the government programs to support the agricultural sector.
- Pointing out the information of the EU entry barriers to exotic fruits.

## **1.5 Methodological framework**

There are several international organizations with the function of monitoring, communicating and ensuring fairness in international business, some of them are: The World Trade Organization (WTO), the United Nations (UN), the International Chamber of Commerce (ICC), the World Bank (WB), the International Monetary Fund (IMF); These entities are a great support for the exporting companies.

Specifically, the research focus on a specific FTA, the Treaty with the European Union, immersed in this agreement, it will be identified the parameters that favor Colombia's agricultural sector in the exotic fruits line.

This thesis will have as the main goals, the supply chain and the processes of international physical distribution DFI of the exotic fruits line to determine potentialities within the sector and to promote the exports ahead to Europe, therefore it will be necessary to check over the whole subject of the EU non-tariff barriers, such as phytosanitary standards, labels, licenses, origin requirement and so on.

Consequently, with the proposed goals we will tell some characteristics at present concerning road mesh projects and infrastructure of ports and airports in the country, which connect to Europe. And the most important government programs to support the agricultural sector.

### **1.5.1 Method**

Exploratory or formulaic: It is advisable to document situation at present that Colombia is going through, indicating in generally ways components of the objectives raised in the work around the economy, activities of the agricultural sector, infrastructure, governmental programs and barriers to international trade, to get such information we will consult in articles of journals, books, research, statistics, documentaries and institutional websites; Thus the research goes on, focus on more specific aspects as how is the operations of the productive apparatus, distribution and national programs in the agricultural sector companies in the exotic fruits line. In the same way, the intention is to go around some generalities of the EU for the entry of foodstuffs, pointing to aspects like barriers and then prioritizing in the exotic fruits area. Thoughtfulness, the study proposes to



point out the more information about the opportunities for Agro in Colombia offered by the FTA with the European Union.

Explanatory: During the research process, we will collect as much information as possible in relation to our topic, that answer the questions already formulated.

### ***1.5.2 Methodology***

Remark: The media have generated too much expectation since the signing of the agreement, they said it has to a lot opportunity for the Colombian companies especially in the agricultural sector. In view of this, we wait for elucidate this information in search of reality and to allude to benefits in a precise way, for a greater use of the FTA.

Deductive: The project will focus on searching for information, that talk about general aspects, which useful information will be extracted to make the transition to the particular, that is to say, we take an X-ray of the business landscape in the agricultural sector and the FTA signed, elucidating cognitive aspects applicable to the usufruct of this link.

Sources and techniques for collecting information: It has been thought on addressing secondary sources through intensive searches of information over the Internet and visits to libraries, which we will initially seek statistical data on institutional pages and expert studies at the international and macroeconomic level; From now on, we will mention some quotes of articles in magazines and current publications that point to the business issue of the agricultural sector in the exportable fruits line in Colombia and the DFI in the country; Once we have a scheme of the operation of the value chain in that sector, we will be consulting in

the pages of the governorate the development plans and projects ahead to agro and finally in institutional pages like the ICA or the EU to find the norms in force to make mention about the barriers and to transmit it in a more friendly language.

## **1.6 Achieve**

With this tool we want to make known the opportunities of the FTA between the EU with Colombia, conducting an exploratory investigation that allows us to determine instruments in the process of development for the agro-industrial sector in the exotic fruits line; Through knowledge of the environment at present that links the support of governmental entities with the agrarian private sector.

In addition, to prevent about the barriers and measures to take into account during the DFI to accede to the European market without incurring over costs by ignorance or bad methods.

## 2. PROJECT EXECUTION

For the purpose of illustrating the advantages of the Free Trade Agreement FTA with the European Union, there will be a macroeconomic contextualization of the Colombian country and trade relationship with the EU, henceforth, it will be pin down the operation of the value chain in the exotic fruits line which must be understood in two different areas:

1. Among small producers
2. The medium and large producers.

Both contribute significantly to the growth of agricultural Gross domestic product GDP in Colombia and have pretty different characteristics that we will detail later.

Another aspect that greatly influences the access of farmer entrepreneurs to the international market is the current infrastructure of the country and the projects in progress, in that way, we will recognize the conditions of major and secondary roads of some departments, conditions of favorability of ports and airports for the food transportation and the main works that are advanced in the Colombian territory. Once reached this point, it is necessary to mention how President Juan Manuel Santos Calderon's development plan in his second term, seeking to improve the competitiveness in the agricultural sector where the strategy arise is "Colombia Sowing" aims to create a million new hectares during the period 2015-2018.

And finally there will be a chapter on the EU's barriers to food entry to the community, which must be assimilated as a dare to strengthen the value chain, after

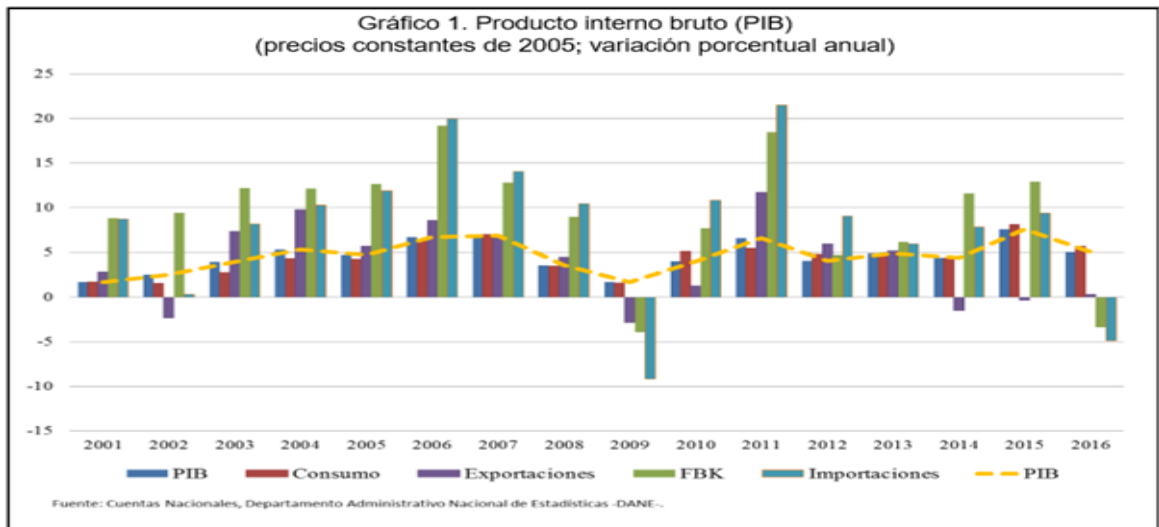
all the fundamentals of these measures are to ensure food security and the sustainability of the planet.

## **CHAPTER 1: COLOMBIAN MACROECONOMIC CONTEXT AT PRESENT**

Colombia ranked fifth with the largest extension of land 1,100,000 km<sup>2</sup> located in the upper left corner of South America is the third largest population with 47 million people throughout Latin America, it has to direct access to Atlantic Ocean and Pacific, abundant natural resources, biodiversity, freshwater sources, flora and also fauna, likewise privileged by the diversity of the climate and topography which allows a wide production of crops and forest products for most of the year (Colombia, 2017); It has about 42.3 million hectares dedicated to agricultural production (DANE, 2015), that represent approximately 39.5% of the total soil surface that could be dedicated to agriculture, besides, the rural population in Colombia is about 24% of the total country, about 11,200,000 people in 2014 and only 36.4% of rural households have access to land, but 75.6% of those who access land have less than 5 hectares (IGAC, 2012) (PND, 2014, p. 337)

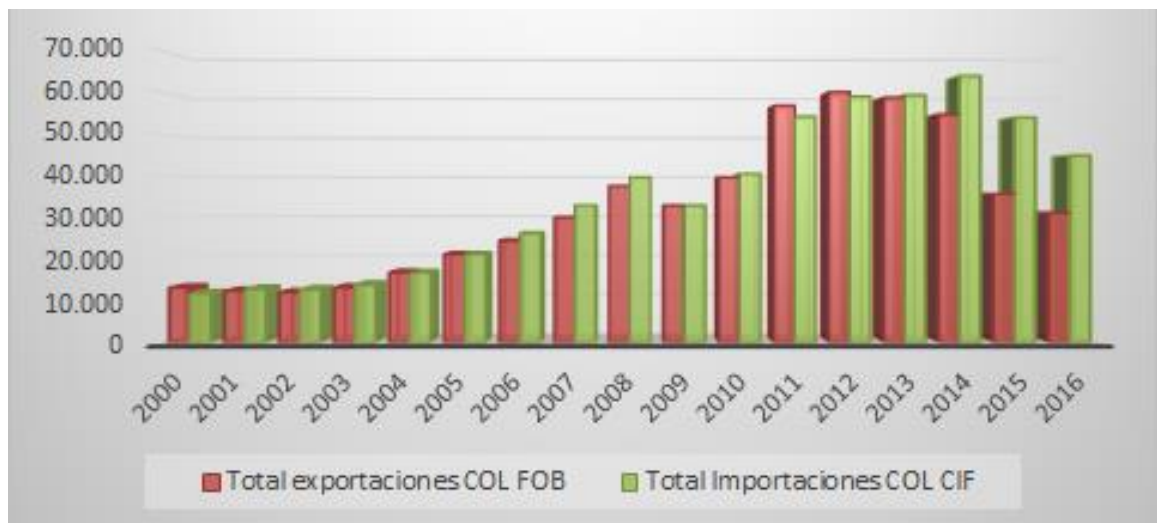
Agricultural products are representing approximately 11% of Colombia's total exports, shaped mainly by the traditional products such as coffee, flowers, bananas and sugar. (MADR, 2016).

**Figure 1: Economic Outlook in Colombia**



**Source:** (Bank of the Republic, 2017, p. 5)

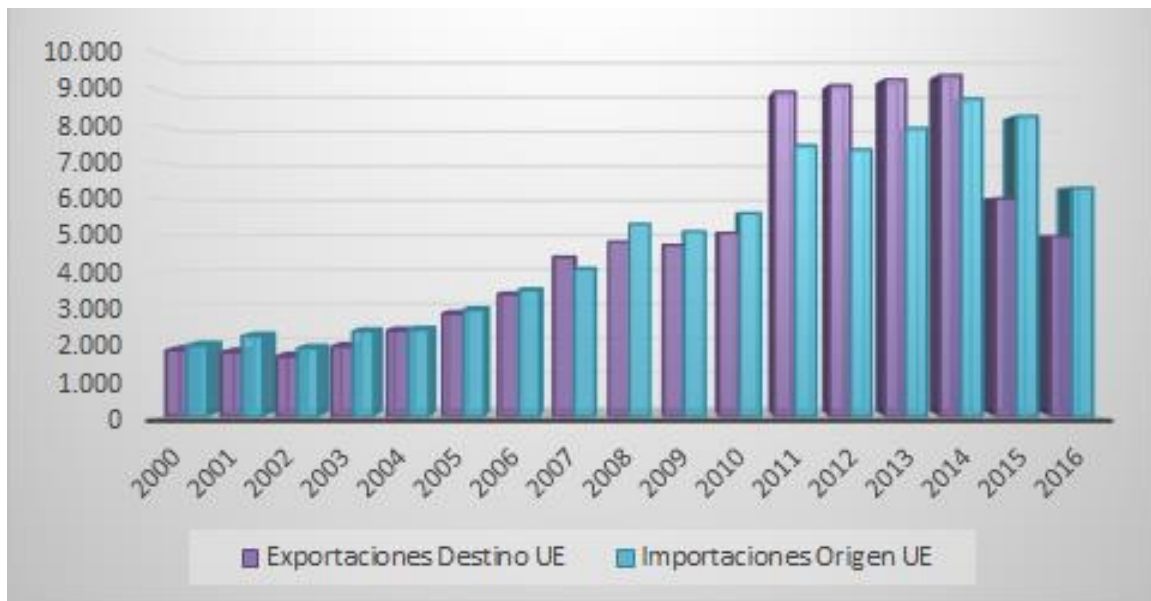
Figure 1 is a representation of the country's macro-economic landscape in this millennium, there is evidence of a positive trend in GDP in the early years, unlike a sharp drop in all the indicators in 2009 as a result of a global financial crisis of 2008, in subsequent years, GDP grows and is sustained by slight variations below the 5% line. It highlights the decline in exports 2014 and 2015 that is recovering very slowly as a result of the fall of the international oil Index as the country is heavily dependent on mining that represents about 70% of the total capacity exportable.

**Figure 2: Total Exports and Imports from Colombia**

**Source data:** (DANE, 2017) **Own Design**

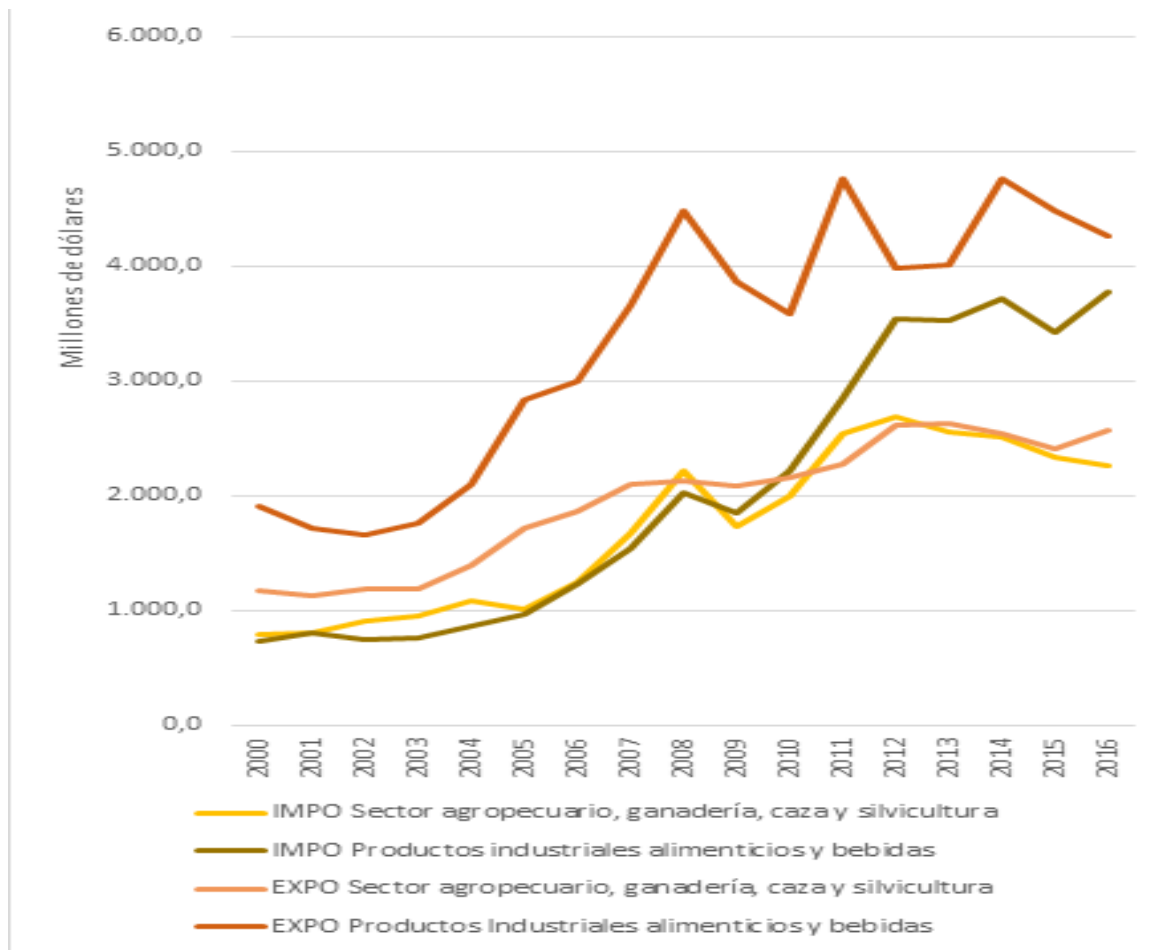
Figure 2 talks about total exports and imports, a very similar behavior is detected in its curve between the two lines, an unfavorable aspect for Colombia because international trade is not generating profits, especially after 2013 where imports exceed exports leaving the country in deficit.

**Figure 3: Trade Balance Between Colombia and the EU**



**Source Date:** (DANE, 2017) **Own Design**

The Graphs N 3 expresses the variation of exports and imports from the EU, you can note that both indicators are also very equal and start linear in a low margin around \$2 billion, it takes a slight growth and remains constant close to \$6 billion in the 2008 period of the global financial crisis and in 2010 exports exceed imports by presenting a strong rise that is held on the line of 9 billion of dollars and gives a turn of papers for the 2015, because the price crude fall where the value of the exports falls representationally.

**Figure 4: Imports and Exports from the Agricultural Sector**

**Source Date:** (DANE, 2017) **Own Design**

This graph is brought up to show the behavior of exports and imports of the primary and secondary products of the agricultural sector, it highlights the export line of industrial food products and beverages, it is being positive because it generated an added value to the national production above the line of exports of the agricultural sector, which also excels positive aspects, an ascending line is conserved except for the potholes in the years of crisis already mentioned.

The line of imports from the agricultural sector, is very close to the exports in the same sector with the difference that are more accentuated its volatility, that is to say



before, this line grows rapidly and in 2008 year it declines vertiginously, in the 2009 it is given upward quickly until the 2011 and thereafter it has a slight downward conduct until the end of the graph. However, importing industrial food and beverage products has also grown strongly especially after 2009 to 2012.

### **The European Union overview**

The European Economic Community (EEC) was born in 1958, economic cooperation was given among the countries of the continent because the post-war period left by World War II; Today it is called the European Union (EU) and is made up of 27 countries taking into account the departure of Great Britain in 2016 where it won the Brexit in a popular referendum.

Integration was done to eliminate barriers and controls among member countries in order to lower prices and increase demand, with excellent results; The EU is formed by more than 500 million habitants and its structure has scope the economic and political union, in which they have a euro zone represented with a single currency euro €, a free movement of people in the Schengen area, a unified or internal market for the free movement of goods and coordinate their economic policy to support the economic objectives of the group. (EU, 2017)

These agreements are present because the EU has not been able to fully consolidate, therefore, agreements and transitional measures are being structured to adhere all the countries in part of the total integration and prevent to affect the rest of the members or newly linked with the full implementation of the strict rules.

- The member countries are: Germany, Austria, Belgium, Bulgaria, Cyprus, Croatia, Denmark, Slovakia, Slovenia, Spain, Estonia, Finland, France, Greece, Netherlands, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Czech Republic, Romania, Sweden and United Kingdom (retired)
- Countries that are not part of the Schengen Treaty are: Bulgaria, Cyprus, Croatia, Denmark, Ireland, Romania. (EU, 2017)
- Countries that are not part of the euro zone are: Bulgaria, Croatia, Denmark,

Hungary, Poland, Czech Republic, Romania, Sweden. (EU, 2017)

The EU has proposed great goals with protecting the environment and the impact caused by the greenhouse effect, hence, it has been taking a benchmark since 1990 for comparison of the gas levels emitted and is proposed not to exceed 2 ° C in climate change, the EU aids the application of clean technologies, use of renewable energies, sustainability in industrial processes, green chemistry, fair trade and closed cycles of production, as much their members as their business partners. At the same time, the EU is one of the leaders in promoting respect for human rights worldwide.

In October 2014, the EU leaders agreed on new terms of climate and energy targets for 2030. These include:

- A reduction of 40% (at least), with respect to the levels of 1990, of the emissions of greenhouse gases.
- A minimum share of 27% of energy from renewable sources
- A minimum improvement of 27% in energy efficiency.

In the long term, emissions will need to be further reduced to prevent climate change get dangerous levels. The EU has pledged to reduce its emissions, before 2050, between 80% and 95% with respect to the levels of 1990 as part of the collective effort of the developed countries to do the same. (EU, 2017)

On the base of environmental care, the EU maintains strict food safety standards and takes great care thereby it not be excluding its traditional food from the market or impede innovation, which it would harm businesses, the reason why food access to the European Union is very rigorous and more non-exclusive.

The Commission claims to be in favor of responsible innovation, supports the fruits whose production is intervened by genetically modified organisms, cloning and nanotechnology (new fruits), in this sense security is guaranteed and economic growth is stimulated, although recent data emitted by the EU official page said that the percentage of agricultural

expenditure in the budget fell and circulates about 38% considering that it was in 70% during the decade of 70 as a result of the big subsidies.

The EU's food safety policy are standards regulating food safety and hygiene, based on scientific arguments and effective implementation to ensure:

- Nutritious and safe foods.
- Clear information on the origin, content, labelling and use of foodstuffs (EU, 2017)

### **Future challenges**

World food production needs to double by 2050 to cater for population growth and wealthier consumers eating more animal products among people with more profit – at the same time as dealing with the impact of climate change (loss of biodiversity, deteriorating soil water quality and so on). Other important goals are:

- helping consumers make informed choices about their food, through EU quality-labelling schemes. These labels – indicating geographical origin and the use of traditional ingredients or methods (including organic farming).
- promoting innovation in farming & food processing with aided by EU research projects, to increase productivity and reduce environmental impacts, e.g. using crop by-products and waste products to produce energy.
- Encouraging fair trade relations with developing countries – by suspending export subsidies for farm products and making it easier for developing countries to export their products to the EU. (EU, 2017)

## **CHAPTER 2 VALUE CHAIN ABOUT EXOTICS FRUIT IN COLOMBIA**

In order to define the value chain of the agricultural sector of the exotic fruits line in Colombia, the main and support activities will be classified and organized with the purpose of focus and understand the cost; all the potentials and sources of differentiation would be generating expectations in development programs within the organizations of the sector to obtain more diverse, innocuous and dense in nutrients fruits.

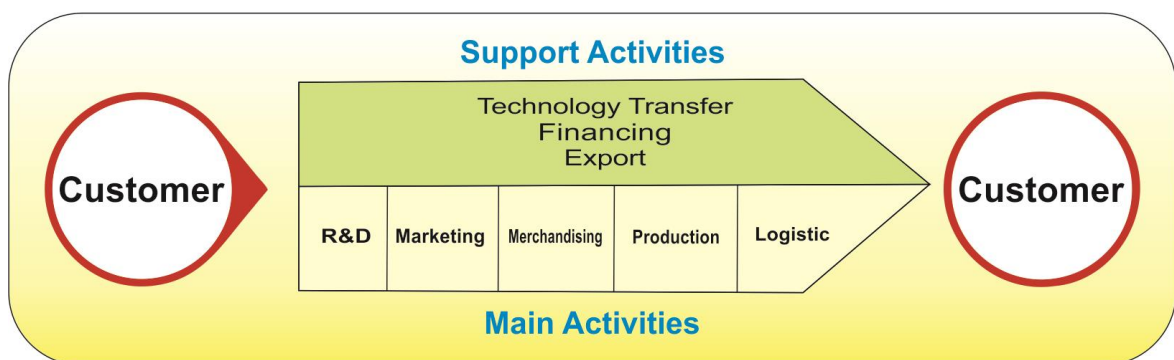
The main steps involved in the value chain start with the client's needs, it follows the research and development area, then marketing, merchandising of futures, so when the product is processed immediately is exported and conclude with a logistical management where the fruits are delivered for their human consumption it will be guaranteeing availability, affordability, quality and acceptability of the food. Moreover, linking support activities to provide feasibility for projects such as financing, access to technology transfer, technical assistance and export process. It also makes it necessary to identify the differences between small, medium and large producers, according to the Ministry of Agriculture and Rural Development (MADR) are small producers those who mainly employ family labour within the agricultural production unit, they have to a small size that it does not require hiring permanent workers insomuch as the extension of land does not exceed 2 hectares; They expend an important part of their production to the commercialization in the markets of consumption and transformation, the others are for their own consumption, they present limitations of land, capital, technology, commercialization and scale, to make that the products of the small farmers access to the international market is required of the association among them or sold their products to international distributors , the size of the companies are identified according to the number of workers and the amount of assets they have.

Since 2015 a new classification of small producer is established, doubling the value of the assets that they were taken to characterize it in the financial system, going from \$93,000,000 to \$183,000,000.

By updating this definition, greater number of producers will have the opportunity to benefit from the special conditions of the different instruments administered by the Fund for the financing of the agricultural sector FINAGRO as are the credit, guarantees and incentives offered by the national government. (MinAgricultura, 2015)

To facilitate the comprehension of the value chain, the following diagram is presented as a way of illustrating the dynamics of the sector.

**Figure 5 Value Chain of Exotic Fruit Line in Colombia**



**Source: Own Design**

The value chain has its start in the needs of customers who are determined by changes in diets, patterns of physical activity and accessibility possibilities of food markets; Aspects that are taken into account by the research and development departments R & D, which implements market research to the different products that are part of the study line, they priority to identify of nutritional benefits, mechanisms to maintain and enhance the content of vitamins fruits and relationship

with substitute products. Other studies that are carried out seek to restore, conserve and optimize the use of soils for the farming, everything related to the topic of seeds and agro-technology, control and prevention of pests and diseases or agriculture of sustainable growth adapted to the climatic change.

This department is responsible for formulating strategies based on the characteristics of differentiation, standardizing production, innocuousness, quality, presentation, low cost and production in scale; With the commitment to create and share knowledge that is carried out by state entities, organizations and international alliances that carry out programs for technology transfer and technical assistance such as exchanges of knowledge, pilot projects and advisory service to rural communities.

In Colombia it is destined to R & D the 0.45 of GDP according to DANE data.

Note: Several studies advanced by Procolombia among other entities, identify the EU as a potential destination for the product, under preferential conditions thanks to the signing of the FTA and expect the demand growth over the following years.

The marketing, promotion and publicity of the product consists in communication campaigns and introduction through governmental entities, the aim is to reach all the areas where our target market is located, image positioning will be guaranteeing the impulse of the agrarian sector and the exotic fruits companies; this is given by the media and public relations where a good image of the country is good to carry out business and present the strengths of our processes and product.

The foreign trade chief concentrates on distribution centers, marketers, small farmers' associations, intermediaries and large producers (natural or legal persons in international business) that establish the logistics and ways to maintain a constant supply in the zones where they want to take place the product, these organizations intervene before and after the production as the fruits are being a perishable product so it is merchandising as a sales of future commodities before production and once the harvest is finished, the product is immediately available for export. (MADR, 2005)

It is carried out by methods of the sale of future, international sales contracts that must be elaborated with meticulous care because this one releases rights and obligations so it constitutes the agreement of the will partner for lucrative purposes, also to take preventive measures over the contract on a lawful action, free of vices, clarity in the ending causal clauses and applicable legislation , and so on, furthermore, including the contractual relationship with the producing companies, obtaining the necessary certificates with the customs agencies, supply chain, package and packaging, storage, contracts of national and international transport, insurance, etc. to export accomplish.

Production is the essential axis of the value chain it ranges from the supply of seed and inputs and finish with the fruit ready for merchandising, in Colombia, according to resolution 3368 of the ICA in 2015, it is permitted only the use of certified seed, hence the agronomists must buy the seed each time they sow in the authorized warehouses that commercialize the products directly from the breeder.

The farming process is watch out under constant monitoring at the periodic application of fertilizers and preventing the propagation of diseases or pests, through fumigation. All this process is advanced with inputs (seeds, fertilizers and agrochemicals) certified by the ICA. (PND, DANE, 2016)

Note: Watch Production and supply chain attachments for broader and more detailed knowledge of such activities.

Some medium and large sized companies have irrigation systems and agro-industry that allow economies of scale. Once the harvest is collected, it will give ahead to the export of the product whereas the small farmers dispose their product to the companies that commercialize it.

Logistics is essential at the international level to export this kind of product and it is necessary to maintain a cold chain until its final consumer. It is wanted to reduce costs and risks, efficiency in the quality of each process both internal and external. It is looking for maintain control and monitoring of the product as well, this approach

the total set of activities during the process of production and transit of the goods until its final disposition.

That is to say, the production and physical transfer of the load is monitored, having all the pertinent, correct and complete documentation with reliable information and always available at each stage, thus avoiding costly potholes that alter the timetable and guaranteeing the merchandise entry into the EU and get the established payment agreements will fulfill.

To end the value chain highlights is the social responsibility component as mentioned it is a high-influence issue for the EU and it has to an aspect to consider by the companies with the other stakeholders, the interest is to cause positive impact to both direct and indirect actors such as workers, community, customers, suppliers, competition, owners and state. (Atehortúa, 2014)

### **CHAPTER 3 LOGISTICS INFRASTRUCTURE AND PROJECTS IN COLOMBIA**

The national agency of Infrastructure ANI, understood as the national State Agency with autonomy both financial, administrative and technical attached by the Transport Ministry; In charge about planning, coordinating, structuring, hiring, executing, administering, and evaluating projects for the design, construction, maintenance, operation, administration and/or operation of the public transport infrastructure in Colombia. So it intervenes in the different projects that the country advances in the modes: terrestrial, railway, maritime and aerial; where the country bets to improving competitiveness on that account they are strategic pillars in the value chain of the entire industry including the exotic fruit line. (ANI, 2017) The most relevant projects that allow companies to reduce time and cost saving for the purpose of exporting products to the EU are below.



## ROAD MESH CARTER TRANSPORT

Since 2012 La ANI starts the fourth generation road concessions program for the construction of fourth generation pathways 4G, the idea is creating alliances between the state and the private sector where a certain part of concession will be assuming by the national administration and the remainder will be granted to build by the private companies in exchange to award the operation control and the collection of the tolls for a certain time. The aim of the initiative is to reduce the time and costs, simplify the routes in order to they are more linear and therefore more efficient, more than 40 concessions will be delivered, 8000 km in pathways among which 1370 will be double carriageway, construction of tunnels, bridges and viaducts with an investment of 47 trillion pesos by the end of this decade that mean a savings in travel time almost 30% and savings vehicular operation cost Approximately 20%. (ANI, 2013)

**Figure 6: Fourth Generation Road Concessions**



**Source:** (ANI, 2013)

At the beginning in 2017, 32 projects have already been awarded with an investment exceeding \$38 trillion pesos over the Colombian territory (Portafolio, 2017)

Only in Antioquia are 8 projects with great importance to invigorate the department economy, the program was named "Prosperity Highways" (ANI, 2013)

The department is one of the most practicing for investment in the fruit sector in the country. The work of the road works that is being advanced by the assignment of projects are called waves that are executed year after year and other completely private investment works.

**Mar 1 and 2:** Mar 1 is from Medellín to Cañas gordas 176 km highlights the construction of the Toyo Tunnel between Giraldo and Cañas Gorda 9.8 km largeness, it will be the longest in the country (El Colombiano, 2015) and Mar 2 from Cañas gordas to Necoclí it will require an investment of \$1.5 billion for 254 km longest. (CAUCASIA-Córdoba-Tolú) close to sign. (El Colombiano, 2017)

**North Connection:** Don Matías and Caucaasia an intervention of 145 km includes a tunnel of 490 meters in length, the variant of Caucaasia, 96 bridges and new ways construction of 58 kilometers. (El Colombiano, 2015)

**Pacific 1, 2 and 3:** Medellín – Buenaventura Pacifico 1 (Bolombolo – South Ancon), Pacifico 2 (Pintada - Bolombolo), Pacifico 3 (Pintada - La Virginia).

**Highway to Magdalena 1:** Bello - Alto de Dolores the route Hatillo - Don Matías is added with a total of 157.4 kilometers. (ODINSA, 2015)

**Highway to Magdalena 2:** Remedios, Alto de Dolores, Puerto Berrio, connecting Sun Route, are 144 km and cost of \$1.7 trillion; It includes two tunnels 310 meters long and 79 bridges between which is the longest on the Magdalena River of 1,480 Mt in Puerto Berrio. (vice presidency, 2015)

However, the Antioquia Governorate has also begun obtaining resources for the

paving tertiary roads, which promises to reach a minimum of 1,000 km during the period of the administration of a total of 10,077 kilometers of rural roads in the department, during the first year of management was reached 216 km executed and in process of hiring new 123 km. (Accountability, 2016)

**Other relevant projects are:**

**Mulaló - Loboguerrero:** 90 km with investment of \$1.6 billion, it will connect from Cali and the industrial sectors of Valle department to the Buenaventura Port in Pacific Coast. It includes 5 tunnels which add up 11.4 kilometers, and 48 bridges and viaducts totaling 3.98 kilometres and a reduction of 52 km route. (Portafolio, 2016)

**Girardot – Honda – Puerto Salgar:** 205 km route, located in Cundinamarca Department, which it will connect the southern Colombian zone with Caribbean and the Sun Route.

**Cartagena - Barranquilla Highway and Prosperity Ring Road:** 146.6 km which 110 Km are in double carriageway, investment of \$1.3 billion to benefit the all Caribbean region (El Universal, 2016) includes one of the longest viaducts in Colombia over the swamp of Virgen 4.73 km. (El Universal, 2016)

**Perimeter Corridor in Cundinamarca:** 153 km, it will contribute to improve the flow of traffic in the way from Bogotá to Villavicencio. An investment of US \$467 was calculated. (BNamericas, 2014)

**Floridablanca Bucaramanga Pamplona Corridor:** 123 km will contribute to intermodal transport in the area. (Vice presidency, Mintransporte, ANI, 2015)

All these projects provide great benefits for the country in road safety, accident reduction, new productive activities and communication of uncommunicated areas, quality of life for the community, social development, promotion of tourism and

Cano Cano, 2017

commerce. These routes represent connections among the inner cities and the exit to both seas of the country, which give great benefits to the logistic sector for the exotic fruits export.

## **FERROUS TRANSPORT**

The country's railway infrastructure is composed of 3,338 kilometers divided into four corridors. Of this total, 1,725 kilometers are in charge of the National Institute of Route (INVIAS) and 1,613 kilometers of the ANI. (Revista Dinero, 2016) These are mostly used for the minerals transport; The main goal is to connect the most railway part of the country.

Between the departments Cesar and Magdalena there are 245 kilometers in concession which it is intended the creation of a second line 151.7 kilometers for the year 2030; The Corredor la Dorada - Chiriguaná finished works September 30th of 2016, it was carried out for a period of two years and allows the mobilization of 72,827 passengers in the journey of 558.3 kilometers; Another corridor is Bogotá - Belencito, the works finished at the end of 2015 in the journey of 315 km; In the Pacific, between Cauca Valle and La Felisa Caldas there are 498 km in works with reaching to a multimodal Freight transport in the area. (Revista Dinero, 2016)

The first passenger light rail system in the country, between Facatativá and downtown Bogota, it will also be awarded. If the railway will operate properly and the different runners will be able to join, their rates could be in the order of 30% below than the Carter mode. The reactivation Antioquia Railway was signed in 2016 to start works in 2017, this was planned to multipurpose for transport of people, freight and waste; at the initial phase are 80 km from Caldas to Barbosa, an environmentally responsible mobility solution. (El Espectador, 2016)

## MARINE TRANSPORT

The Colombian ports, connect more than 4,200 maritime routes of export in regular service, direct and with connection, offered by 40 shipping companies destined to more than 590 cities in the world. In 2015 Colombia mobilized by its port areas more than 198 million tons of good, among these 2,400,000 of container units. (PROCOLOMBIA, 2016)

**Expansion of the Port Society of Cartagena:** over \$200 million was the investment for Colombian ports to expand Cartagena's multi-purpose terminal, as a result 20 meter access channel and a second channel of access to the Bay of Cartagena which opens the possibility for the arrival of large ships and the entry into operation of 5 modern super post Panamax gantry cranes , they have to an installed capacity to mobilize up to 1.5 million TEUs annually and after its expansion work, it will be able to mobilize up to 2 million, this port is one of the most important of the country, because it is the point of origin to the majority exports with destiny to the EU by its location in the Caribbean region in Atlantic Ocean. (Revista Dinero, 2016)

**Buenaventura Port:** at present mobilized for export a lot of goods of pineapple and avocado destiny to Europe and other countries, since 5 years it made extensions of 14 hectares in the container terminal which doubled its capacity to receive and store more containers unit, the works and the inclusion of new endowments cost \$ US 154 million and it can annually support about 650,000 TEUs corresponding to 13 million tons. Nowadays the terminal has a place with 250 electrical connections for refrigerated containers and acquired in teams six more patio cranes, to count with a fleet of 13 that work with electricity and diesel and a super post Panamax crane which completes four to attend the megaships that will pass through the new locks of the Panama Canal and that are already arriving at the port of Buenaventura. (El Tiempo, 2016)

Another project of great interest to the exotic fruit sector is the construction of the

**multipurpose port in the Gulf of Urabá** area of intense agricultural activity, with access to the 4G ways of the second wave Mar 1 and Mar 2, the connection with the Toyo Tunnel and the Sun Route. It is valued in US \$600,000,000 it will have to a 7 million tons' terminal and capacity of 1 ' 200,000 TEU, an area on land of 40 hectares, ideal to receive boats of 13,000 TEUs, because of depth of this platform will be 14 meters, as well as a viaduct of 3 lanes whose length is 4.2 kilometers for the connection with ground and will have 60 tractors that transport the load to the warehouses. (Portafolio, 2016)

EU-bound frequencies are 7-15 days and average transit lasts about 14 days to 40 days depending on connections and destination. The main ports of arrival are Rotterdam Holland, Algeciras Spain, Barcelona Spain and Valencia Spain, Lisbon Portugal, Genova Italy, Le Havre France, Hamburg Germany and Antwerp Belgium. (PROCOLOMBIA, 2017)

These ports mean great importance to invigorate of exotic fruits sector on that account the maritime route constitutes the main mode to Colombian exports which improves the competitiveness in logistical terms by the investment increase in ports since the ANI beginning concessions in 90's.

## **AIR TRANSPORT**

Air freight offer from Colombia to the EU has more than 900 air routes, direct and connected, operated by 22 Airlines, which have access to 145 cities; The main airports of arrival in 2012 were, Amsterdam Holland, London England, Madrid Spain, Lisbon Portugal, Rome Italy, Paris France, Frankfurt Germany and Brussels Belgium. (PROCOLOMBIA, n.d.)

This year has been advancing a major national investment for the reshuffle of all the airports in the country among which stands out:

El Dorado Airport modernization: located in Bogotá it will be consolidated after increasing its capacity by 30%, it will allow about 400,000 operations per year and

attend an estimated 40 million passengers and the possibility of the construction the second terminal located between the municipalities of Madrid and Facatativá. El Dorado is the main airport of the country and connecting the majority of flights destiny to the EU from all the cities in the country. (Portafolio, 2016)

The ANI is in charge of 7 concessions in 16 airports in the country, projects include works such as demolition to rebuild, modernization, extension of terminals and tracks, air conditioning of terminals, repaving, parking lots, green areas, construction of new freight and passenger terminals, new control towers, aircraft maintenance buildings and expansion of platforms, construction of service centers, expansion or construction of international terminals passengers or freight, and so on.

In 2017, the new international terminal in Cali was launched, in Medellin the expansion made in the passenger terminal and expansion of the airports Santa Marta, Montería and Quibdó as well, in addition to the works in more than 30 airports that the “Aerocivil” advances. (Revista Dinero, 2017)

Air transport is also a way used for the transport of fruits and it is very useful in order to reduce times.

## **CHAPTER 4 GOVERNMENTAL PROGRAMS TO THE AGRARIAN SECTOR**

The National Development Plan of Colombia PND has to goals and guidelines focused on the peace building process, integrating the territory and its communities, reducing poverty levels, productive development through science, technology and innovation, social mobility, field transformation, security, justice and democracy for peace building, good governance and green growth. (PND, 2014)

The topic we are interested is about transforming field and green growth where it is identified lots of limitations because of:

1. Gaps in terms of formalization and regularization about conflict and proprietorship.
2. Lower human development of rural inhabitants and lack of social mobility.
3. No generating a sustainable income and lack of access to productive assets.
4. Deficiency in the public sectorial provision for goods and services.
5. Few both national and regional institutions for rural and agricultural Development management.

The “DANE” presents statistics that proving serious problems essentially to dignify the rural community life, such as index of poverty in this regard, the Government attempt to promote a territorial reorganization in order to facilitate the access land with legal certainty, the efficient soil or natural resources use, best sanitation condition and also water sources for this population. (PND, 2014, p. 337)

In addition, the Government will develop a new model of integral technical assistance arranged on modules of care which they include operational models to meet the different needs of the peasants according their profiles articulated in “the National System of Science and Agro-industrial technology” and “the National System of Competitiveness, Science, Technology and Innovation”. The models are defined from the agro-ecological zones that justify their creation, updating or validation in territory. Supporting will be vital from the national and regional universities and the “Agricultural Sector Research and Technological Development Centers” (CENI) in the development generation for departmental systems in Colombia. (PND, 2014, p. 350)

Another important performance of the state focuses on the infrastructure planning model construction to landing adequacy that prioritize in the productive systems water demands namely orienting to sustainability and efficient use of them. For application in large-scale agricultural fields, it should need water storage for prevention in the event of drought or flooding. Strengthening the marketing and distribution of agricultural inputs and products, therefore, a portfolio of rural logistic solutions will be created in different regions of the country with financial instruments



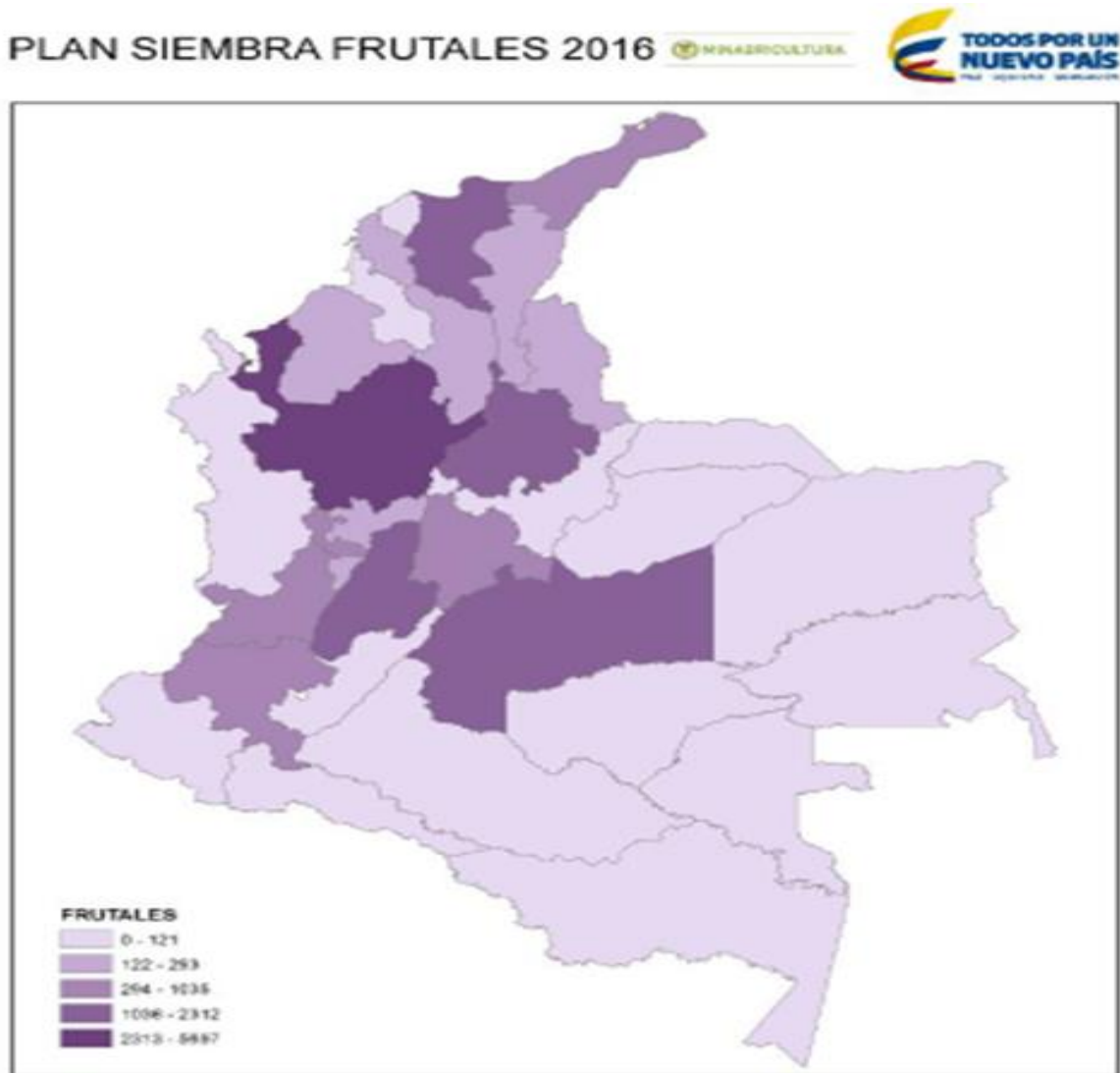
that facilitate the construction of collection centers, logistics centers, cold systems, traceability technology, laboratories, among others. (PND, 2014, p. 351)

As a development measure the government has created policy instruments such as the “Rural Housing Program”, the “Land-Titling Program with the restitution of land for victims”, the “Rural Micro-Finance Fund” and “Rural Development Fund” through the Agrarian Bank, among others. (PND, 2014)

In 2015 started the strategy "Colombia Sowing" by the Agriculture and Rural Development Ministry (MADR) by their initial in Spanish with which aims to reach the goal to farming a million additional hectares in the country between 2015 and 2018, thus increasing country productivity and exportable volumes in a sustainable way and good quality; This goal will be allocating a considerable part for the planting of fruit crops thereby:

Fruit crops will increase its surface sown to 70,000 hectares 20% during four-years 2015-2018. Generating 43,699 new direct jobs at the end of the period. The model focused the strategy over 20 departments in 72 municipalities, which 22 are categorized as post-conflict. Among the fruit crops with zoning in the process of validation by the “Rural Agricultural Planning Unit” UPRA are: mango (6,250 ha), avocado (25,000 ha), pineapple (16,500 ha), which group 47,750 ha of the projected goal of 70,000 ha. New fruit trees for 2018. The passionflower (passion fruit, Granadilla and Gulupa) contribute 6,235 ha., bananas will provide 3,000 ha. and uchuva will contribute 1,245 ha. additional. The remainder of the goal, 11,770 will be obtained from the new sowings that they are achieved in different fruit trees to those mentioned. (MADR, 2016, p. 50)

**Figure 7: Departmental Focus for Sowing Fruit Crops**



**Source:** (MADR, 2016, p. 51)

This is how the proposed PND materializes with the program: “Colombia Sows”, where government institutions commit and make a real effort to boost the country's potential for agricultural development.

There is a participation of international groups which Colombia is a member for the support of the agrarian sector, one of them is FONTAGRO “Unique Mechanism of Cooperation for Agricultural Innovation in Latin America and the Caribbean” which

Cano Cano, 2017

operates through regional platforms. Some of the projects are research and technological development applied to livestock, maize, coffee, potato, banana, fruit, oil palm and forage. The country has benefited enormously as one of the members that it has participated in more consortiums, at date are 42 with total quantity \$ 36,900,000 dollars, some of the achievements in the sector are:

1. They were characterizing 71 blackberries and 43 lulos accessions and nine concessions of blackberry and lulo were identified with superior quality to the commercials.
  2. A methodology was developed for the propagation of Blackberry by stake.
  3. Low-cost lulo in vitro propagation systems were established with producer organizations.
  4. Many a professional and producer were trained in the different projects.
- (FONTAGRO, 2015)

## **CHAPTER 5 ENTRY BARRIERS TO THE EUROPEAN UNION**

As a closing of this research, it will provide transcendent information about technical standards or procedures for evaluating the conformity of food security for the purpose to bringing goods into the EU, in addition, considering the reflection of these measures after all the agreement between the parties is based on transparency consequently we going to explain the reasons for applying international standards or modification for the proposed achievement based on the complexity of agricultural products as Perishable Products and directed to the people consumption. From this approach, we going to enunciated some of these measures where the aim is human security and to regulate the growing problems caused to the environment by the excessive exploitation of large companies in the current economy.

Before entering into matter, we emphasize that the EU is an actively committed group with the care of the environment, member of several international conventions such as the “Kyoto Protocol” to reduce greenhouse-effect emissions and attack global warming, “CITES” to control endangered fauna trafficking and the most recent “Millennium Development Goals” in its second intervention “Sustainable Development Goals” in 2015, there are 17 global goals proposed by world leaders in order to remedy the world's most serious problems over the next 15 years as extreme poverty, protect the planet and ensure prosperity.

## **THE EU SECURITY POLICY**

### **Rules of Origin**

The origin refers to the nationality, value and heading tariff of the products marketed to determine the charges and taxes to be applied. When a product was processing in more than one country it is recognized with the country in which the last substantial transformation took place. (European Commission, 2017)

It is important for two reasons: the world is highly globalize and it is difficult to determine the origin of a product without a planned control, in this way, the EU has to instruments to determine if a product has to sufficient binding components with the country from which its origin mentioned and complies with the standard required, and through certain provisions, they are monitoring the movements of food products along the supply chain by “Integrated Veterinary Computer System” TRACES, which carries the records of the border controls and the commercialize goods certifications, this is important in order to be able to access the tariff exemption benefit that it was agreed in the FTA agreement and the other reason arises in case of food will be poisonings affecting European consumers, traceability and risk management operations are requiring, so the EU authorities trace the origin of the emergency situation. (EU, 2017)

## **Sanitary and Phytosanitary Measures SPS**

These standards arise from the need to protect people's lives and health, animals and vegetables especially in the area of food safety, the agreement establishes the obligation of States to prevent the propagation of pests, pathogenic organisms and health diseases directly or indirectly.

So an exporting country must comply with the EU sanitary and phytosanitary requirements applied in a proportional and non-discriminatory manner, the proportionality is given in the measure of the risk that the exporting country represents around a particular measure, that is to say at greater risk greater demand and the non-discriminator has to do with a treatment of equality compared to the exigencies to other countries of similar conditions.

There are companies that will have a privileged status to not be verified in each export operation of origin by having the approval of the verifier agency which creates a list of these companies in order to facilitate the export dynamics among the countries.

The health authority for the Colombian case is the ICA and it will always have to autonomy to execute a partial or total verification of a certain load, in order to ensure the effectiveness health checks, the frequency is based on performance and the results are a public nature based on transparency.

Once the products entered the EU, there is a "Rapid alert system for food and feed" (RASFF) is a measure to protect people against food that it is not in accordance with European Food safety standards. This system determines whether food presents prohibited substances or contains excessive amounts of high-risk substances, whether they are residues of veterinary medicinal products or carcinogenic food coloring. (EU, 2017)

The controls are supported by EU scientific information and may prohibit:

- Using of pesticide sprays, food supplements, dyes, antibiotics or hormones.
- Food additives, such as preservatives and flavorings or ultra-frozen products.
- Substances in contact with foodstuffs, for example: plastic containers.
- Special rules on genetically modified food, feed, bio-proteins and new foods.
- Ingredients Labelling than could cause allergies and indications of healthy properties, such as "low-fat" or "high fiber content".
- Official controls and inspections designed to ensure compliance. (European Commission, 2017)

From today, all beverages processed, food and packaged which are marketing in the European Union must comply with the European regulation on "Information and labelling of foodstuffs" (regulation 1169/2011). Since December 2014, the legislation obliges companies to clearly inform the labels of their products if the food had to contains any of the 14 most common allergens. It is also obligatory to inform the type of oil, it is not enough to say vegetable oil, but to specify if it is olive, sunflower, palm and so on. From December 2016 the nutritional table will be compulsory. All processed foods and packaged beverages should include the detail of nutritional information: energy, fats, saturated fatty acids, carbohydrates, sugars, proteins and salt. The information could be reading on the back of the container and by 100 grams' milliliters, which it will allow the comparison among products. (MINCIT, 2017)

## **Technical Barriers to Trade OTC**

They are institutional or legal instruments, known as standards, technical regulations or procedures for evaluating product conformity they are related to product presentation characteristics, size, volume or quantities allowed per packaging, product information and manufacturing standard not harmful to the planet that do not have to allied with phytosanitary aspects.

The importance of OTC are:

- National security
- Prevention of deceptive practices
- Protection of human health and safety
- Protection of animal, plant life or health
- Environmental Protection

It is necessary for companies to make investments in terms of access to information, plants adaptation to provide the international technical requirements and conformity assessments where it is guaranteed the fulfillment of the companies with the importing country requirements. Therefore, there are certified production standards and international management standards that organizations could adhere in order to achieve global harmonization in technical standards and regulations in turn arise initiatives to improve information through web sites or business exchange.

As regards conformity assessment, there are many alternatives that exporters could welcome such as “supplier conformity statement”, “designated organization assessment conformity”, “acceptance results in the exporting country” or “voluntary agreements of evaluation system” among contractual countries. (Salvador Ministry, 2014)

This issue is an important aspect for exporters and concerns market-related and product labelling. Food must include relevant information to consumers: ingredients, exact weight, expiration date, lot number, country of origin and mode of

employment; Also fulfilling physical and design techniques as typeface, size, languages, pictograms, material among others.

In this sense, the models of “Bio-trade” are encouraged they allude to environmental, social and economic sustainability, derived from native biodiversity; Clean technologies focused on the efficiency of resource management, such as water and energy, as well about controlling over pollution and waste; Green Marketing considers change activities that decrease environmental impact among many others: but they are excluding to traditional procedures that consider indiscriminate logging, burning, use of polluting agrochemicals that affect the vitality of soils and the entire habitat.



### 3. FINDINGS

All cooperative programs, associativity, transport infrastructure, agro-technology, technology transfer, investment in science and experimental development, financial and community support, there will be welcome by the sector, however, only with inclusive policies could achieve the long-awaited development of agriculture in the country.

The conditions of the country are given for potential development, but a small anchorage is lacking to allows and return the confidence among the actors to chain the system and improving the living conditions in the field and also to promote the development of the sector and the country. If we review the research, we note that the country has to a great comparative advantage than it was compared to our trading partners. The entire value chain is fully identified and the country is investing heavily in infrastructure and the field

The commitment to peace in the country is not in vain, it is true that many taxes were raise to the community for the maintenance and reintegration of armed groups, however, do you ever think about the areas that said yes for peace in the referendum, all of them were located in rural areas where the conflict was concentrate, these people tired of living at war chose to vote in favor of the “Yes”, forgiving and having a new option. The persistence of the government to achieve the agreement, at present allows the country to business as a conflict-free nation with an appropriate environment and good climate to conducting business and attracting foreign investment, in fact to the return the control to the institutions on

their territory and it arise the support to the farmer with the restitution of land and other programs.

The productive chaining is vital to guarantee the articulation among the different actors of the productive chains, they use of the market opportunities that it present both at local and international level. It is very important to continue with the impulse to the production associatively by generating production volumes with homogeneous qualities that produce attractive commercial opportunities for the national producers and also advance in projects of accessibility to the companies by the way to getting the certifications and standardization of processes.

In the same way, the state is betting on the integration between the private and public sectors in order to achieve the necessary advances in transport infrastructure to improve national competitiveness.

The program "Colombia sowing" is a sign of interest in agriculture, since it changes the traditional format of politics because it is based on subsequent studies and has to defined goals ideal to promote the sector.

It identifies as interesting practice the use of tools as benchmarking or association to the success processes, for example we have the coffee, which works is thank association and today have great benefits for farmers, in the first step any farmer could come in to a federation attention point to receive technical assistance completely free about the requirements to start the project, then you could qualify to obtain the coffee card by meeting certain crop requirements that prove it as coffee growers in the national territory and help to obtain soft credits in the Agrarian bank with preferential and differential interest rates; And in last stay access to associate of the federation where you could receive discounts in the inputs and participates in the different programs that the Government creates to strengthen sector. Without a doubt, the biggest benefit of the Federation for coffee Growers is always count the security of being able to sell its production at the market price in terms of fairness.

In this sense the creation of a solid association supported by the institutions of the State becomes a potential for the emergence and development of the exotic fruits sector and an equal treatment for this population lacking resources.

Meanwhile the EU's barriers are signs that indicate ways to work, in terms of processes to be improved and the structure to be followed; It also reminds us that the planet is the vital importance for the survival to our species and future generations, whence it is very important to spread corporate social responsibility.

Other important aspects identified in the research about the EU are the trend for healthy eating, an increase in demand for increased purchasing capacity and fair trade principles among nations that tend to dismantle high subsidies in the agricultural sector.

In order to achieve all the benefits proposed during this work, it is considered necessary to work on adverse issues such as: informality in national internal processes and forms of marketing of peasants which constitutes one of the greatest barriers to the progress field in the country, Colombia is a country where a culture of the most alive prevails and that it is the reason when peasants approach with their products to the majority squares they will be forcing to sell very low prices, because they could not afford to return home with the harvest and wait for a better offer, characteristic that it is well known by the suppliers that taking as an element of power in distributive negotiations where bargaining prevails and as a result the peasants are the big losers

Lobbying and corruption are diseases, a colossal pollutant that depresses productivity in the agricultural sector, thus abolishing the particular interest and false blurb that manifests individual goal like general aims to harmonizing all stakeholders in the sector and achieve the objectives shown by the PND of government administration.

combating common delinquency and sanitation in rural areas problems or generate greater opportunities of work and education and integration of them, among others. Finally, we highlight our positive position in the face at present and future panorama

of the country, and we share a feeling of joy in elucidating all the opportunities immersed in the sector of exotic fruits for the purpose of exporting to the European market.

## 4. CONCLUSIONS AND RECOMMENDATIONS

### 4.1 Conclusions

- Exotic fruits have a great potential in sales according to the needs of the target market by the food trend of natural, healthy and nutritious products as long as they are in accordance with the safety measures, in addition to the growth of income that allow a higher demand and even to receive a higher price.
- Exotic fruits mean a colossal opportunity for companies and the development in the country if they manage to consolidate guilds in each of the stages of the value chain, the synergy would be the engine for continuous improvement, reduce costs, certify the product and increase the volume of production and sales.
- Standardize production processes allows to generate an image of trust in customers, reduce costs by reducing the number of controls to goods and reprocess by inefficient productive practices.
- The country is working hard to provide the ideal conditions for the development in the country, there is evidence of a total transformation over the infrastructure in transport, security conditions and positive image of the country abroad.
- Policies aligned to small farmers in the first-level difficulties by improving field conditions, on issues of technology transfer and technical assistance, adequacy of basic public services, availability of legalized land, signing of the

peace agreement with the FARC and international agreements, all benefits in favor of the nation.

- There are great comparative advantages for the availability of land, freshwater, climatic conditions, biodiversity that favor the agricultural sector.
- There are opportunities immersed in the midst of restrictions, because these are the product of a need to provide food security to people and maintain the sustainability of the planet. hence, if the Colombian companies develop sustainable processes friendly to the environment, they optimize the use of resources and also guarantee quality and healthy products that comply with European regulations, there would be no barrier to access that market and on the contrary we would make way for global technological development.
- Social responsibility policies in consideration of all factors both internal and external are key to reducing environmental impact, improving conditions in the community and achieving successful results.

## 4.2 Recommendations

This work was done in order to encourage entrepreneurs with a view to exporting and obtain the benefits of the FTA between the EU and Colombia in the exotic fruits line.

In this sense our recommendations are:

- Considering that the meaning of highlighting opportunities does not mean unknowing weaknesses, it is about generating a positive mindset and projecting ourselves to achieve our dreams.
- A working model to follow, is the one implemented by NASA, they always search for perfection, they carry out the exercise of prospecting all the possibilities without leaving matters at random in all their projects because the risk is very high so it is necessary to study each stage in depth, as it is

the subject of exporting to the EU where there are great opportunities and in turn high factors of risk which they are overcome under the knowledge.

- Leave an invitation to learn about the importance of corporate social responsibility and sustainable economic development as a means of national and private growth. By taking in management system based on social responsibility the environment is protected, opportunities for the whole community are generating, healthy competition, customer recognition and great economic benefits are promoting.
- Associating, the union makes the force, we must regain confidence in others to join us and be more competitive, always within the framework of synergy and ethical values.
- Looking for certification of the processes and policies that allow to improve the conditions of innocuousness in the products, to enhance their nutrients and characteristics in the organic matter.
- The exotic fruits theme is a market little explored in our means with great opportunities for entrepreneurs, the recommendation is to open our minds to new possibilities and non-traditional products.
- As it can be observed, the topic is very broad and in future research the main objective must be based on generating new tools that allow the reader to innovate and build ideas that benefit their companies and all their environment.

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## **ANNEXES**

### **A. Annexes: Exotic Fruit Production**

The production process of native fruit producers in Colombia will be detailed, this begins by determining the ideal conditions of climate and soil which in turn indicate the types of products viable for cultivation in the area, this process is usually done under the recommendation of an agronomist, or based on the expertise and tradition of peasants.

Important aspects to consider in the initial phase imply lot status verification which the new project is being carried out, the ideal is when the land is in stubble or fallow because when you want to change a crop to a new sowing should be more cautious by presence of pests. (PND, DANE, 2014) Another recommendation before starting the crop is making an approach with prospective buyers to guarantee the sale of the harvest, calculating tentative of the profit margin and ensuring the viability of the project as well.

For the lot cleaning it is always advisable to make it with bowie knife or scythe, never use hoe, nether herbicides or burns because it causes erosion and loss of nutrients in the soil.

The fruits come from plants that are living beings and as such have the ability to reproduce. There are two methods for the plants reproduction both “asexual or vegetative” and “sexual or generative” type.

**Asexual or vegetative:** it is the multiplication by itself of an organism does not require seeds, then they will show the asexual forms that exist for fruit trees.

- ★ **Stolon:** The stems of the plant stretch and at close distance generate roots that give the formation of a new individual. Example Strawberries.
- ★ **Stem:** It is the buds that they were originated at the tree trunk foot, these must be selectively cut and replanted, because more than three together implies that among them competing for the nutrients of the soil.
- ★ **Stake:** They are fragments of stems that have buds recognized like “Cuttings”, these are planted forming a “Staked”.
- ★ **Grafts:** The cuttings are attached to other stalks already sown generating the union of the two organisms in one, with the intention of improving the primary. (Biologia.edu.ar, 2011)

**Sexual or generative:** Originating of a seed is the most used by agronomists on that account there are processes where you get more number of seeds and therefore delivery more quantity of plants.

In Colombia agronomists used to select the best healthy, productive and vigorous fruits from crops then extract the pulp, pour everything the seeds with the juice in a plastic container and let it ferment in an open place under the shade for 48 hours; The product of this process is called “Mucilage” which is mixing with abundant water to separate the viscous part of the seeds locating on an absorbent paper and let dry. It is necessary to supervise the drying because of it does not allow to stick a seed with another one and observe that no fungus or foreign agents appear.

The storage of the seeds is made in closed containers of plastics or glass, keeping in the refrigerator at an average temperature of 4 ° C about 3 months' maximum. The aforementioned process constitutes a tradition of the farmers however at present there is a resolution 3368 of the ICA 2015 which requires the exclusive use of certified seed so that this process is cancelled so it is bind that the farmers buy the certified seed.

The next step, it is to create a nursery or germinator, starting point of ever orchard. Here the seed is sown in bags beneath soil one-inch average to not drown them and remains covered with a poly shade that it is fabric with polyethylene threads and protects the seedlings from ultraviolet rays, once the first seedling shoots are given in about one month and a half they extend about 15 to 30 cm and they will be transplanting to the orchard, nursery should be located in an isolating area of crops to prevent infection with pests or insects.

The orchard is the agricultural zone destined for the cultivation of the fruit trees; The substrate used in dimples must be free of diseases and pests, this has a preparation process suggested by the ICA where it mixes 4 parts of soil by 2 of organic matter (muck, manure, biomass and compost of which we will talk later) and one of sand, this mixture extends with a height not exceeding 20 cm covered by a plastic where it receives the sun , allowing for a few days that the sun will take care of eliminating any kind of fungus, parasites or viruses. Already having the dimples with the substrate will be sowing seedlings taking care to leave visible a little neck of the root and stagger so that the water rains flows and it does not drench preventing problems by "Fusarium" those are whom attack the roots.

In case of climbing plants should be made an arbor to have a technical crop, they are squares of 4 \* 4 mt., 5 \* 5 mt., or 6 \* 6 mt. formed by Buried sticks at the ends. The long stick are three meters where protrude two meters and then it goes a main wire in the top, caliber 10 with spikes 14 gauge and crossed with 16 gauge wires to spread the stalks. Henceforth the care and control it will be determined by the conditions of the climate, the soil and the fruit type. Irrigation, impregnation and

fertilization are carried out with the expert support and use products endorsed by the ICA as agricultural lime, cal dolomite, phosphorite, 15-15-15, 10-30-10, 18-18-18, 17-6-18-2, diammonium phosphate-DAP or urea.

During the period of cultivation, some diseases should be known to allow immediate reaction and eliminating its propagation, some of them are: "The dryer" that generates a negative abnormal growth of plants; "The white mildew" wilts the leaves and looks like a cotton coating on the whole plant and fruits that rot it; "The alternate host" that is presented in the foliage and fruits in formation of circles that alters the development of the production; "Anthracnose" it is another fungus that leaves dark spots or a type of scars on fruits and leaves. Pests should also be identified in crops causing large economic losses for the sector among which they are: "Eudocima phalonia" it is the fruit-piercing worm, the moth white leaves eggs in the heart of the fruit and at birth these eat out of the fruit leaving a trail of fallen fruits in all the crop that must be collected for their control; "Thrips" is an insect that attacks the buds of the stems; "Boll weevil" beetle that feeds on the pollen which produces the fall of the flower that must also be collected during the monitoring made to the harvest. (PND, DANE, 2014)

For all previous diseases or pests, the market has many curative products that help to control with good quality, providing they are identifying in time and fumigations are carried out every fortnight. Agronomists periodically perform a monitoring accompanied by detailing, it includes, removing from dry leaves and collecting decomposed fruits which significantly helps to prevent disease.

The weed control is vital and depending on the area it is done every 2 or 4 months, it is not done at ground level and waste is left to avoid erosion and moisture loss as the weed fights with the plant by light, moisture and nutrients, in fact it is procreator of pests. To finish the harvesting of the fruit in a maturation stage close to 60%, it is carried for the process of washing, drying and selection of the fruit by quality both extra and first class.

Note: This speech is based on the video information by (Osorio, 2015)



In Colombia, it recognizes an intensive use of agrochemicals, little technological development, low technical assistance, unsuitable processes which has not allowed standardizing, high quality products and consolidating costs structure for the crops.

## **B. Annexes: Exotic Fruit Supply Chain**

The supply chain has some element as: the packing, transport, storage and distribution they are always taking care about the conditions in cold and safety chain to reach the destination export. In the use of the packaging there are three types these are:

- Container: Primary packaging has direct contact with the product, contains, protects and communicates the mark.
- Package: Secondary packaging contains the container providing greater protection and it serves as a means of marketing presentation as well.
- Packaging: Tertiary packaging is for handling, storage and transportation.

Once selected the fruits they are packaging carrying out a technical process fixed by an established quantities numbers and average weights per container, this container could be in several materials such as plastic, wood, corrugated board, polypropylene, trays, sacks of fibers as long as they were approved by the EU; Then we use the secondary packaging as boxes of cardboard, wood or plastic where the containers are carefully located for it does not scratch the fruit, one of the most common for the fruits transport are the "IFCO" or "European trays" they are plastic and have several sizes according to the need, supplied usually by the importer and finally the tertiary packaging that serves to unitarize load by palletized, the boxes are placed on a stowage, the boxes are grouped by columns if they are very heavy or crossed like a brick wall if the merchandise is voluminous, then it is consolidated with strapping or stretch tape, the measures sizes pallets standardized by I.S.O. are

80 × 120 cm or 100 × 120 cm their height is less than 1.9 mt. however pallets, stevedores or huacales to get into the EU the wood must have the ICA register of “heat treatment” HT and “fumigation with methyl bromide” MB. The refrigerated container is the final disposal for the load export. (Oranges and Fruits, 2015)

In order to get into the EU, it is carried out by several modes both air and sea. Inside Colombia the transport is mainly carter it is composed by the “generator” who is the natural or legal person to celebrates the transport contract with a transport legally constituted company and duly enabled, he gives the merchandise to the conveyor, to move from one place to another, namely he is the person who performs the order and may be acting on their own or foreign.

“Inc.” The freight transport public service by road, both natural or juridical persons, legally constituted in accordance with the Colombian norms and duly authorized by the State.

“Driver” The operator of the transport means and who is licensed by the Transportation Ministry to carry out such activity, among the other vehicle documents required by the authorities.

The generator gives the goods to the transport company which it uses has several alternatives in means of transport as refrigerated trucks or mules with refrigerated containers unit this activity is coordinated between the two for the driver to place the load at the right time and at the desired destination with a time range for 10 hours by unforeseen; The selected vehicles must be well washed, dry, odor-free and have supervision of ventilation, temperature and relative humidity to hold the cold chain they require.

The documentation at this stage of the supply chain are the “manifesto of load” travel document that allows to know the information about the transport means, the exact number of packages, the way of identifying them, the nature of the merchandise that composes the load and its weight. In addition, it covers the goods transport to the different authorities, when they are mobilizing in public service

vehicles; and the “land transport remittance” document where they are stipulated according to the trade code article 1010, with the specifications established in the transport contract and the general conditions from the this.

Shipping is the most frequent way to connect the two continents and the freight will always be unitarizada in a refrigerated container. Storages in the distribution stockpiles are conditioned to maintain the cold chain and the manipulation of the pallets which it is carried out with forklifts or conveyor belts to the stands.