



Spices & Herbs in USA

Market Analysis & Consumer Trends

Produced by

A Project of

TRADE USA
Exploring Opportunities™



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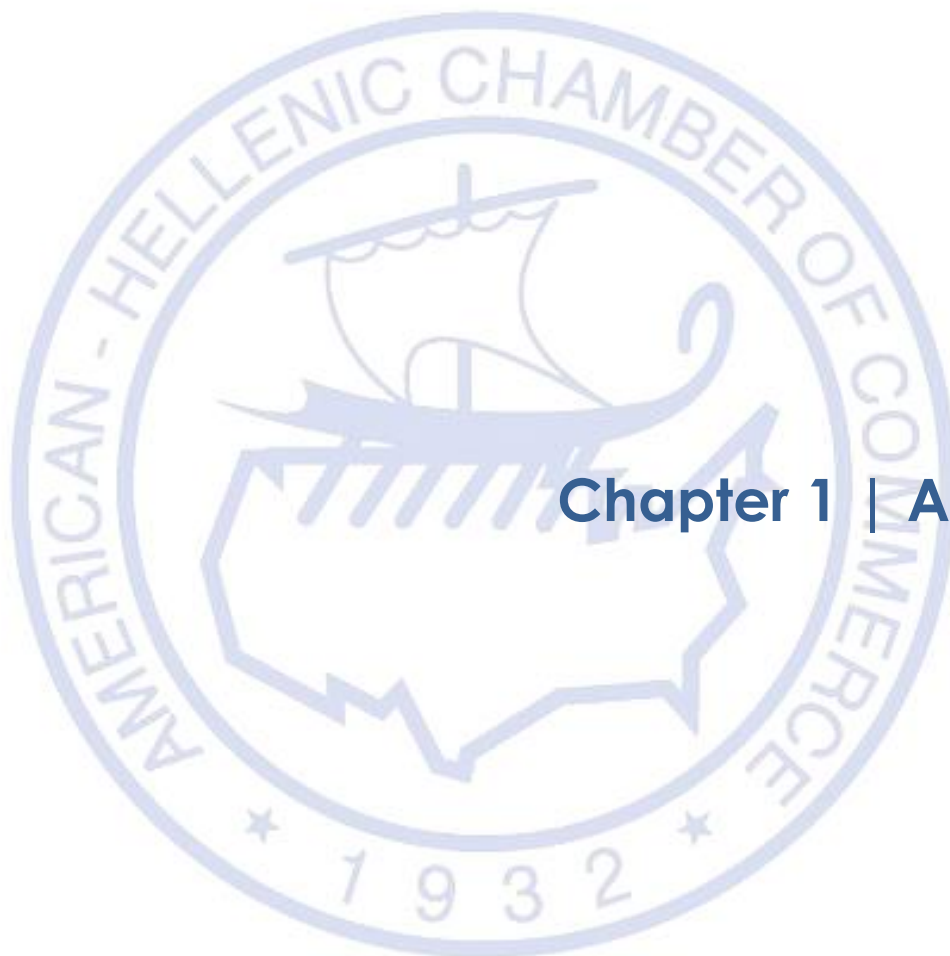
At a Glance

This report presents an overview of the 2014 United States (US) market for spices and herbs, as a net importer and the opportunity that it presents for potential Greek and European exporters, which marked a strong come-back in 2012 after a period of maturity in the mid-2000's. The market for Spices constitutes a large proportion of the market for Spices, Tea and Coffee which has grown by 21% in monetary terms and represents the second largest market within the food industry, between 2006 and 2012.

In brief the international landscape examines specific international Harmonizing Codes which are of particular interest to the Greek exporter because of their competitive advantage in production and therefore have potential to become more competitive on an international level, using data analyzed from the International Trade Center and the US Census Bureau for the period 2010 -2014 and their bilateral trade patterns. These products include cinnamon, ginger, saffron as well as basil, parsley garlic and related herbs, used in traditional Asian and Mediterranean cuisines. The opportunities exist and will be greatly enhanced once the Trans-Atlantic Trade and Investment Partnership (TTIP) is implemented. The Asian economies i.e. India and neighboring countries remain traditionally dominant players in the field and present relative barriers to entry. On a European level, Spain has the largest production of spices and herbs for the examined period. Verifies an extremely limited Greek participation and bilateral trade, which at the moment is insignificant in terms of overall trade.

Ginger and turmeric are amongst the top-imported spices to the US supply market, for the given period according to the data analyzed. Saffron is also a popular spice in terms of imported value; however the demand is inelastic due to the relatively high price and existence of possible substitutes with related spices. Garlic is a market which presents limited opportunity and strong barriers to entry for new players, since China has the majority of the US supply market and the largest global production in general.

Factors which have significantly contributed towards the increases in demand for spices and herbs amongst US consumers include the awareness of the health benefits, globalization (increased tendency to travel, increased immigration) and familiarization with foreign cuisines. Additionally, the recent economic crisis has also contributed to the increase in demand, since the US citizens has started to cook within their household and an average have limited their restaurant expenses. Online consumer trends have become an important indication of consumer preferences. For this reason the analysis continues to examine online consumer inquiries in Google and supports the above trend.



Chapter 1 | About

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1.1. Spices and Herbs

A spice is defined as an edible, dried, part of a plant which is traditionally added to food primarily for its natural flavoring, aromatic or visual properties (European Spice Association (ESA)) and is distinguished from a herb which typically is a leafy green part of a plant used for similar purposes. In the market both spices and herbs are found in like forms commonly powders, dried seeds, fruits, roots, barks or vegetable substances.



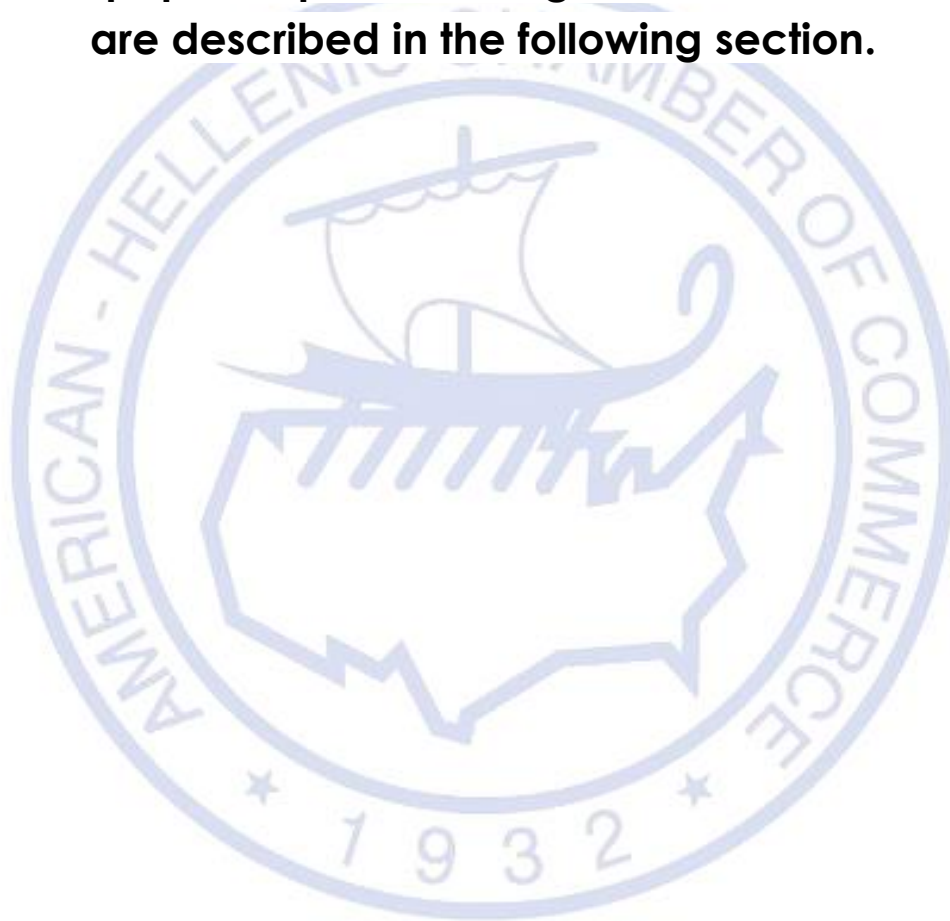
The history of spices goes back as long as human civilization and thus spices have played an influential role in the history of exploration, human development and therefore trade. In ancient times spices were considered items of luxury mainly due to their antimicrobial properties which allowed them to be frequently used to preserve food for long periods of time. Today various different spices are used for diverse purposes including in cooking (such as the turmeric root), medicine, religious ceremonies and rituals as well as in the production of perfumes and cosmetics. In the developing world that they are still prominently used to prevent meat from spoiling and in warmer climates to prevent and to treat infectious diseases. Garlic for example, is often used as an antibiotic.

Spices originate from and grow in tropical and warmer climates primarily in southern and eastern Asian countries. The trade patterns analyzed in the fore coming sections verify this trend since it is these same countries which continue to dominate the exporting markets of the world and the US.



Recently the global market for spices has been growing as a result of a combination of factors which have led to an overall upwards trend in consumer demand and consumption. Firstly, the recent economic recession has encouraged an increasing number of citizens worldwide, amongst which Americans, to cook more often at home. Secondly, the increased tendency to travel and explore different cultures due to globalization has resulted in an increased popularity of ethnic foods and international cuisines, amongst which is Asian food.

The most popular spices amongst American consumers are described in the following section.



Ginger



Zingiber officinale commonly known as Ginger is a flowering plant that belongs to the Zingiberaceae family (as does Turmeric, Cardamom and Galangal) and whose stem grows annually to about one meter tall bearing yellow flowers. Its root is widely used as a spice or folk medicine.

Ginger originates from South (Tropical) China; it was initially spread to other Asian countries and now it is cultivated all over the world. The main exporters of ginger today are Australia, West Africa, Jamaica and India, which has recently become the leading producer and exporter. In the Western cuisine ginger and its extracts are widely used in the preparation of savory foods (such as curry) and sweet dishes (such as gingerbread, ginger biscuits and ginger cake). Their taste, pungency and smell can vary considerably according to the country of origin and the variety of the crop. In the market, ginger is commonly found in six different forms which are the following: fresh, dried, pickled, preserved, crystallized and ground.

Because of its aromatic properties, the ginger root is used to make perfumes and cosmetics. In addition it is used to make herbal and traditional Chinese medicines since evidence suggests that ginger has medical properties that can prevent cancer, arthritis due to its anti-inflammatory properties, and diabetes amongst other illnesses. When added to tea or food it is also used as an expectorant for colds, fatigue and nausea. Different species of the genus *Asarum*, in the Aristolochiaceae family are commonly called Wild Ginger because of their similar taste.

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Turmeric

Originating from Southwest India, Turmeric (*Curcuma longa* or *Curcuma domestica*) is a perennial herb that belongs to the ginger family of Zingiberaceae. It is mainly cultivated in the Southern central states of India, in southern and eastern China, Taiwan, Philippines, Java, Haiti, Jamaica and some parts of Latin America.



The plant is gathered annually for the rhizomes; and the parts that are not used fresh are dried and grounded into an aromatic yellow powder known as turmeric (or haldj as it is known in India). Amongst its numerous uses, in the west, turmeric is used as a rice colorant and for flavoring purposes and a standard curry constituent. Other times it is used as a digestive in sauces or as an economical substitute for saffron or to prevent the spoilage of foods by oxidation because of its antioxidant properties. Herbalists suggest that it can be used to prevent heart disease, Parkinson's, cancer and even help treat the HIV infection. Curcumin is the active ingredient in turmeric, which has a significant effect on mood, inducing neural growth factors in the brain and thus can also act as an antidepressant. Turmeric also has anti-inflammatory and anticholesterolemic properties and it is therefore used in Chinese medicine to treat various diseases such as Asthma and Coryza.

Saffron



Crocus sativus otherwise known as saffron belongs to the Iridaceae family of plants. Saffron is a corm producing plant which mainly grows in the eastern Mediterranean region and produces white or purple flowers. When dried saffron has a yellow-golden colored powder coming from the tip of the crocus thread and is used as a cooking spice and food coloring or dye. Iran is the dominant producer and exporter with over 90% of the total production worldwide. Saffron is also cultivated in Spain, Italy, Greece and France, and Kashmir and originates from East Asian, perhaps Asia Minor or Greece. Typically saffron grows to a height of 20 – 30 cm and sprouts between 5 and 11 white and non-photosynthetic leaves called cataphylls. Amongst its various remarkable properties saffron also known to prevent cancer although this has not yet been scientifically verified.

In the USA however, saffron is rarely used as a medical agent sometimes given in order to prevent the eruption of exanthematous diseases in childhood. Mainly because of its high cost, it is also not frequently used in the American cuisine and is commonly substituted by turmeric which produces a similar colour when used as a food-colouring agent giving out a different taste.

Cinnamon

The inner bark of the *Cinnamomum Zeylanicum* tree commonly known as Cinnamon belongs to the Lauraceae family of flowering plants and originates from Ceylon in Western India (now known as Sri Lanka).

Sri Lanka is amongst the top cultivators and producers of cinnamon worldwide both in terms of volume and value after Indonesia (which produces over two thirds of the global production). Cinnamon is also produced in the East and West Indies, Mauritius, Reunion, southern India, China and various other parts of Asia, which are minor producers. Traditionally there are four types of cinnamon namely: Cassia cultivated in Arabia and Ethiopia which literally means “the peel of the plant” in Hebrew, True Cinnamon from Sri Lanka, Malabathrum from the north of India and Serichatum which originates from China.



Primarily cinnamon is used as a popular flavouring in cookery as well as in alcohol. As far as its medical properties are concerned, cinnamon extracts have been used to treat gastrointestinal problems due to its carminative and stimulant properties, to relieve symptoms of flu and cold but also to improve the taste in medication and food. Its antimicrobial properties explain why cinnamon and its extracts are also commonly used in foods to retard spoilage particularly in tropical climates or when left unrefrigerated.

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There is a grading system used in Sri Lanka, which divides the cinnamon quills into four different groups according to their diameter:

- Alba which is less than 6mm in diameter
- Continental, less than 16 mm in diameter
- Mexican, less than 19 mm in diameter
- Hamburg, less than 32 mm in diameter

Parsley

The world's most popular herb is parsley (its botanic name being *Petroselinum crispum*). Parsley is a species of *Petrolinum*, which belongs to the *Apiaceae* family and is named after the Greek word for "rocky parsley" a relative to celery. Parsley is again native to the central Mediterranean region, precisely southern Italy, Algeria and Tunisia and has been cultivated for more than 2000 years.



The ancient Greeks held parsley to be sacred as it was used as a medicine before being consumed as a food. Today, more than 30 varieties of parsley exist and it is commonly used in the Middle Eastern, American and European cooking which have numerous medical properties, often ignored when they are used in the kitchen as a table garnish. The leaves are mostly used in cooking and the stalks can also be used to add flavor to a dish.

% of RDA per 100 g	Vitamin/Mineral
38	Folates
220	Vitamin C
281	Vitamin A
1366	Vitamin K
14	Calcium
77.5	Iron
12	Potassium
112.5	Magnesium
Note: RDA-Recommended daily allowance Source: USDA National Nutrient data base	

Parsley is one the herbs which not only is available all year round, but it is easy to store both in the fridge and in the refrigerator where it can be stored for longer periods of time. In addition, Parsley both in its fresh and dried form is low in calories and rich in flavonoids antioxidants, such as apiin, crisoeriol and luteolin, which have also been said to help treat inflammation, cancer and cardiovascular diseases. Parsley also contains volatile oil components which include including myristicin, limonene, eugenol, and alpha-thujen.

Herbs are an excellent source of minerals; a summary of the main ones is presented below.

Basil

The herb basil is named after the Greek word (basileus) for king because of the royal fragrance of the herb (Basil, Production, agriculture, forestry and fisheries, Republic of South Africa) otherwise known as Saint John's wort; it belongs to the mint (Lamiaceae) family. Originating from India, basil has been cultivated for more than 5000 years and like most other herbs has multiple purposes including medicinal and for culinary use. The plant is sensitive to the cold which can easily destroy it and therefore it is commonly cultivated in dry climates. The main producers and exporters of basil are around northern Europe, the northern United States and in some parts of New Zealand.

Typically basil grows between July and October and produces green leaves grows between 30–130 cm (12–51 in) tall, with opposite, light green, silky leaves 3–11 cm (1.2–4.3 in) long and 1–6 cm (0.39–2.36 in) broad with small white flowers and a terminal spike in many varieties and the taste varies according to the species and cultivar, some may have often and often sweet anise, lemon or thyme smell. Basil's green highly fragrant leaves are used primarily as an herb in the European and Southeast Asian cuisines such that of Indonesia, Thailand, Malaysia and Vietnam and is the main ingredient of pesto in the Italian cuisine. Common uses of basil are in chicken, fish, meat soups, tomato, vegetables, pasta and potatoes. Basil is rich in the vitamins A, K, C, magnesium, iron calcium and potassium. When dried it can be stored in a cool place for a period up to six months.

As for its medical properties, basil is used to help treat stress, depression, asthma, diabetes as well as mellitus in India. Like the majority of the herbs and spices mentioned above basil also has anti-inflammatory properties so it can help reduce swelling as well as anti-bacterial properties and potential use in treating cancer.



1.2. Harmonizing Codes (HS Codes) for Spices & Herbs

The HS Codes indicated in the table below belong to the family of spices. The analysis is broken-down further according to sub-codes. In particular the sub-codes 0910, 0906 and 0904 are analyzed since they are the most highly consumed and traded goods within the spices category in the US market and of primary interest to this report.

09	Coffee, Tea, Mate & Spices	Major Exporting Countries
0904	Pepper, peppers and capsicum	Vietnam, India, Indonesia, Brazil, China
090411	Pepper of the genus Piper, ex cubeb pepper, neither crushed nor ground	
090412	Pepper of the genus Piper, except cubeb pepper, crushed or ground	
090420	Fruits of the genus Capsicum or Pimenta, dried, crushed or ground	
090422	Fruits of the genus Capsicum or of the genus Pimenta : Crushed or ground	
090421	Fruits of the genus Capsicum or of the genus Pimenta : Dried, neither crushed nor ground	
0908	Nutmeg, mace and cardamons	Indonesia, Guatemala, India, Grenada, Sri Lanka
0909	Seeds of anise, badian, fennel, coriander, cumin, etc.	India, Egypt, Canada, Turkey, Finland
0906	Cinnamon and cinnamon-tree flowers	Indonesia, Sri Lanka, Vietnam, China, India
090611	Cinnamon Cinnamomum eylanicum Blume (excl. crushed and ground)	
090619	Cinnamon and cinnamon-tree flowers (excl. cinnamon cinnamomum eylanicu	
090620	Cinnamon and cinnamon-tree flowers crushed or ground	
090610	Cinnamon and cinnamon-tree flowers neither crushed nor ground	
0910	Ginger, saffron, turmeric, thyme, bay leaves & curry	China, India, Turkey, Spain, Peru
091010	Ginger	
091011	Ginger : Neither crushed nor ground	
091012	Ginger: crushed or ground	
091020	Saffron	
091030	Turmeric (curcuma)	
091040	Thyme and bay leaves	
091050	Curry	
091091	Mixtures of two/more of the products	
091099	Spices nes	
0910996000	Spices NESOI ¹	
0910992000	Origanum (Liooia Spp.) crude or not manufactured	
0910990500	Thyme, bay leaves, crude or not manufactured	
0910991000	Curry	
0910995000	Dill	
0910994000	Origanum (Liooia Spp.) NESOI	
0910990600	Thyme NESOI	
0910990700	Bay leaves NESOI	

¹ Not Elsewhere Specified or Included



The additional HS Codes which belong to the herb category and are referred to in the report are presented below.

HS Code	Product Label	Major Exporting Countries
0712906500	Parsley, dried, whole, cut, sliced, broken or in powder, but not further prepared, NESOI	China, Turkey, Germany, Chile, Egypt, Mexico
0712904040	Garlic, dried (except powder or flour), whole, cut, sliced or broken, but not further prepared	
0712904020	Garlic powder or flour	
1211909140	Basil, fresh or dried, whether or not cut, crushed or powdered	Mexico, Egypt, Colombia, Peru, Germany
Source: International Trade Center (ITC)		

Main Exporting Countries of Spices and Herbs to the USA

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Chapter 2 | International Competitive Landscape

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2.1. General Overview

The market for flavoring products (spices and herbs) is making a comeback after a mature period characterized by slow-growth trends in the mid-2000s according to recent research (Prepared foods, 2010). Globalization effects and the potential health benefits are the most significant factors which encourage consumers to make use of these seasonings in their cooking. This has led to an increase in value of the spices market and their imported volume.

In the United States of America (USA) domestic production is not sufficient to cover the domestic demand (Mintel, 2010) making the USA a net importing market for both spices and herbs. The USA market for spices is typically grouped together with that of coffee, tea and ready meals according to the Euromonitor International report (November, 2012). According to this report for the period 2006 – 2012 the market has grown by 21% in monetary terms, representing the second largest market within the food industry. During this period there was an average annual increase of 3%, which is equivalent to a total value of 144.1 billion US\$. The demand side of the market is dominated by households, which remain the primary consumer group with 57% of the total demand in 2012. This second place is held by restaurants, bars and canteens, which account for a stable market share of 33% during the same period (Passport, November 2012).

Examining the production trends, the turnover of local condiments and seasonings (a category which includes spices, sauces and vinegar) producers accounted for only 16% of the total turnover; however this was accompanied by an impressive 48% growth of this particular market segment for the period 2006 – 2012. The neighboring countries Canada and Mexico are the major foreign buyers of American products however, these exports are mainly from the coffee market. US exports are dominated mainly by soups, ready meals and “other” food products. It is also interesting to note that in terms of annual growth per sector from 2008–2012, the Condiments and Seasonings fragment of the market, has overall decreased from approximately 10% in 2008 to 5.5% in 2012, with a negative trend of 0,5% in 2010, according to the Euromonitor International Statistics.

The attractiveness Index of Coffee, Tea, Spices and Ready Meals among other US industries in a stable economic environment as well as during economic downturns, an index which covers multiple parts of the industry's performance including the bargaining power of suppliers, have been rated as average in a stable economic environment and well in a risky economic environment.



2.2. Spices

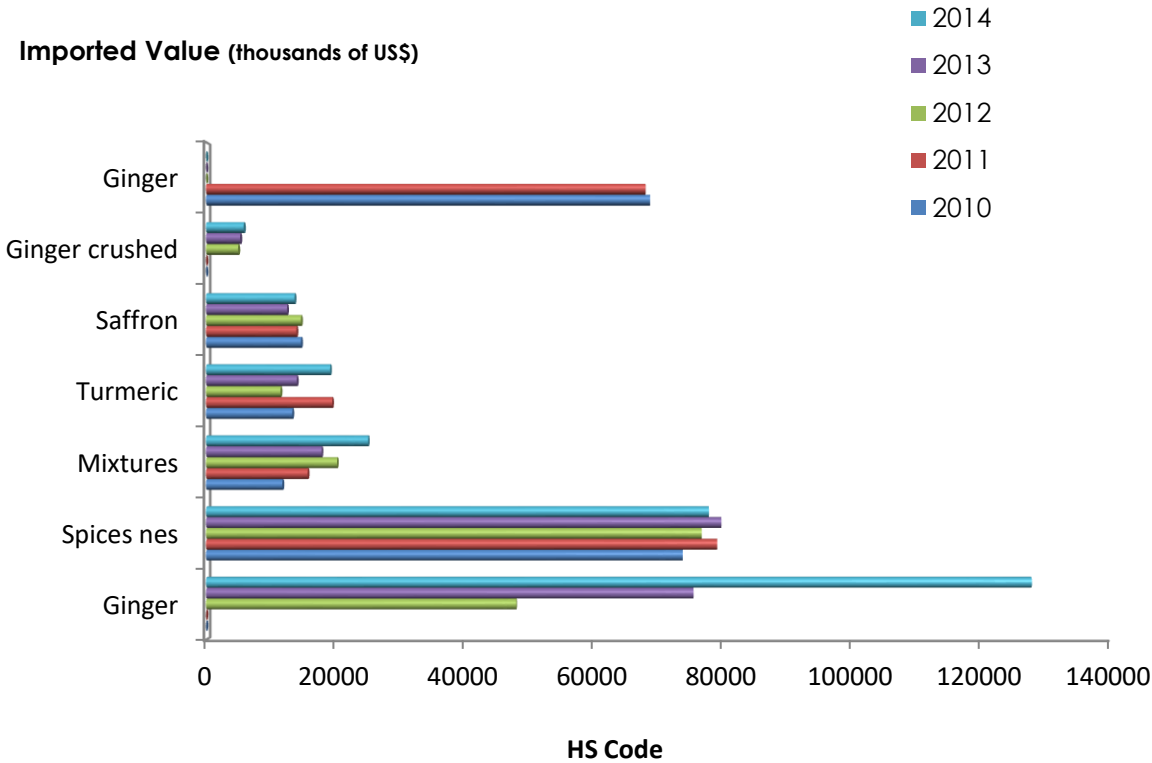
I. Ginger, Saffron, Turmeric, Thyme, Bay Leaves & Curry (HS Code 0910)



Figure 1 below illustrates the trade balance for the most highly traded sub-codes of the HS code 0910 (Ginger, Saffron, Turmeric, Thyme, Bay Leaves & Curry) in thousands of US dollars, according to the International Trade Center (ITC) statistics.

The products with the highest demand from this category are summarized below in order of decreasing value for 2014.

Figure 1 | USA Imported Value of Ginger, Saffron, Turmeric, Thyme, Bay Leaves & Curry (HS Code 0910)



Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE



GINGER

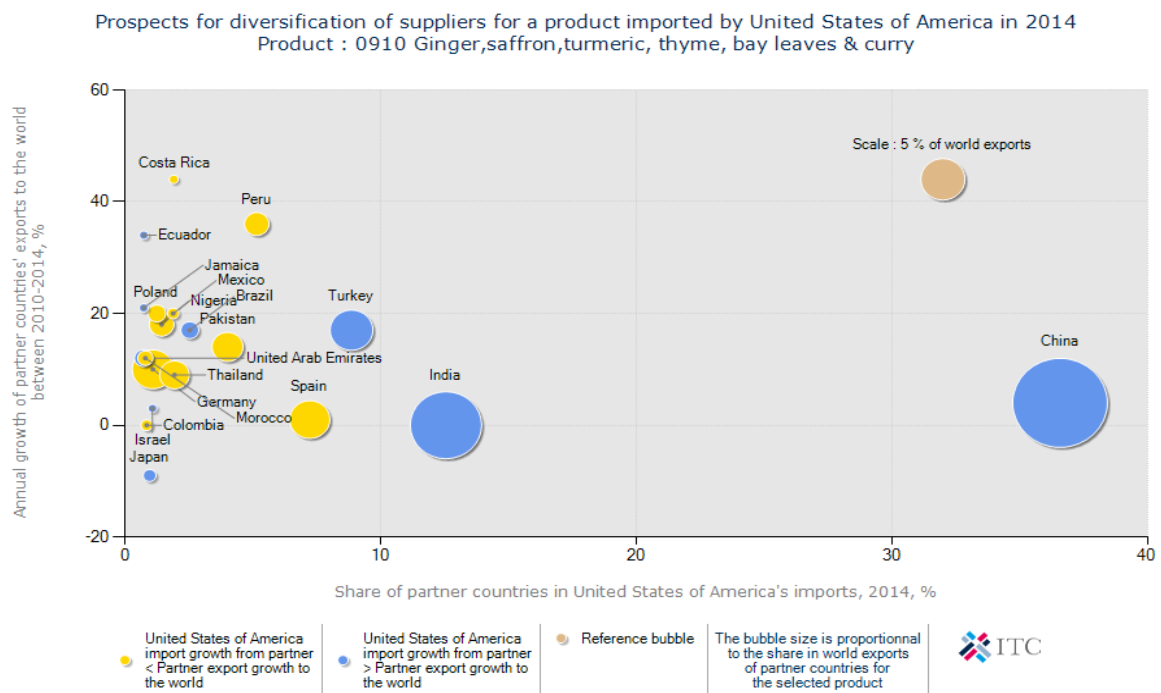
Ginger in its unprocessed form is the predominantly imported spice to the US market in 2014, which also rates highly during the previous years. Its imported value presents a growing trend, indicating an increasing popularity amongst US consumers which peaks in 2014. Previous to 2012, the ginger root was still the country's main imported product under a different HS Code (i.e. HS Code 091010).

OTHER SPICES (NOWHERE ELSE SPECIFIED)

The product with the second highest imported value is "Spices nes", a category which consists of spices which are nowhere else specified and has sustained a relatively stable position for the past five years. It is interesting to note that this category includes other popular herbs used in culinary such as dill, thyme and oregano. Amongst the other most highly imported spices under the HS Code 0910 is turmeric, saffron and ginger in its processed form.

Figure 2 | Diversification of Suppliers for Ginger, Saffron, Turmeric, Thyme, Bay Leaves & Curry (HS Code 0910)

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Source: International Trade Center (ITC)

HS Code 0910 "Ginger, Saffron, Turmeric, Thyme, Bay Leaves & Curry", are amongst the products which are imported in the US market so to satisfy domestic demand. From figure 2 it is evident that the diversification of suppliers of spices to the US market is dominated by Asian exporters. In total the Asian exporters represent exactly 90% of the total imports in 2014. The leading exporters being China, India, Turkey, Spain and Peru.

China is by far the most dominating competitor for the domestic US market, in this particular market. A likely explanation is its natural competitive advantage in terms of suitable growing conditions and it's leading presence in the international markets. China is the world's largest economy by nominal Gross Domestic Product (GDP) and the world's leading economy according to Purchasing Power Parity (PPP). Additionally, China has been the world's largest growing economy for the past 30 years with average growing rates at 10% annually according to the International Monetary Fund (IMF).

Table 1 represents the imported values² by country for the period 2010 – 2014 and confirms that China is the most dominating exporter amongst its competitors for HS Code 0910.

Table 1: Imported Value by Country to the USA					
HS Code: 0910 (Ginger, Saffron, Turmeric, Thyme, Bay Leaves & Curry)					
Unit: thousands of US\$					
Exporters	2010	2011	2012	2013	2014
World	182,544	196,573	176,354	205,125	269,951
China	55,359	47,736	37,661	62,011	98,759
India	27,280	39,506	32,695	30,765	33,901
Turkey	12,215	14,014	17,692	24,684	23,931
Spain	18,440	19,952	21,738	15,780	19,528
Peru	6,934	7,987	6,932	6,710	13,923
Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics					

According to data from the ITC, China exported roughly half of the total imported value to the US, presenting significant competitive advantage from its largest competitor which is India. In monetary terms in 2014, China's imported value was three times that of India. This pattern is then continued with Turkey, Spain and Peru.

Amongst the five top competitors, Spain is the only European exporting country of this sub-category of spices to the USA and fourth in position with a relatively low imported value compared to the top Asian producers and marginally lower than that of Turkey.

²Import value indexes are the current value of imports (c.i.f.) converted to U.S. dollars and expressed as a percentage of the average for the base period (2000). (World Bank, 2005) In this case the values are presented in thousands of US dollars.

Table 2 compares the imports in terms of quantity³ measured in tons. This distinction provides insight into the potential differences that may exist in quality and crop varieties, explaining the demand patterns of US consumers.

Table 2: Imported Quantity by Supplying Country to the USA					
HS Code: 0910 (Ginger, Saffron, Turmeric, Thyme, Bay Leaves & Curry)					
Unit: tons					
Exporters	2010	2011	2012	2013	2014
World	70,913	81,144	85,711	87,430	92,143
China	36,762	43,914	46,966	47,371	43,366
India	8,694	10,937	11,820	10,717	11,100
Turkey	4,626	5,035	5,732	7,270	7,547
Peru	1,829	1,952	1,612	2,254	5,726
Costa Rica	1,572	1,000	1,394	2,088	2,429
Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics					

Costa Rica holds the fifth place in terms of quantity; however its product does not have a high monetary value. This indicates a lower popularity amongst US consumers or possibly a lower valued product, since it is also not found amongst the top-five competitors in Table 1.

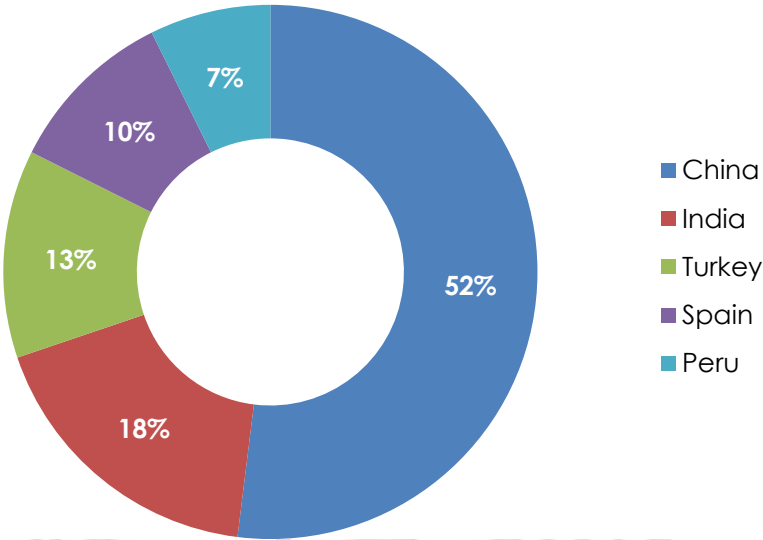
Peru is found in fourth place in terms of volume and its monetary value is also relatively high. Spain is not found amongst the top exporters in terms of volume, only in monetary terms as shown in Table 1, suggesting that the value of the imported spices from Spain are of a much higher quality than those coming from the Latin American countries (Peru and Costa Rica). Another possibility is that the variety of the crop is different than that growing in the Asian continent and its taste more friendly to US consumers.

Overall the Asian countries are the main competitors of the US domestic market for spices, which are favored by the naturally suitable growing conditions for spices. According to the ITC the five key players in the USA importing market for 2014 are represented in the pie chart below. Figure 3 presents the percentage contribution of the top competitors as of the top exporting countries.

Their percentage of contribution varies significantly between the first and fifth player in the market: while China holds 52% of the importing market on its own, its competitors do not contribute more than 20% of the importing market at a time, while the smallest competitors together make up the remaining 17%.

³ Imported quantity indexes are the current value of imports in number of tons as defined by the International Trade Center

Figure 3 | Market Share of USA Imports in 2014 of Ginger, Saffron, Turmeric, Thyme, Bay Leaves & Curry (HS Code 0910) for the Top-Five Competitors



Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

China's dominant position could be a limiting factor for the other existing or new competitors, since it suggests that there are maybe limiting opportunities for investment in the market not worth investing in. However, this does not seem to be the case because each main exporter manages to remain dominant by specializing in the exportation of a single product. In this sense there still is room for further innovation and interest for new entrants in the market. This significant gap between China and the rest of its competitors is possibly explained by the existence of regional minorities and local communities in China, which are able to produce these spices in large quantities and at a significantly low cost. The major exporting countries of "Ginger, Saffron, Turmeric, Thyme, Bay Leaves & Curry" are analyzed individually in the following section.

China

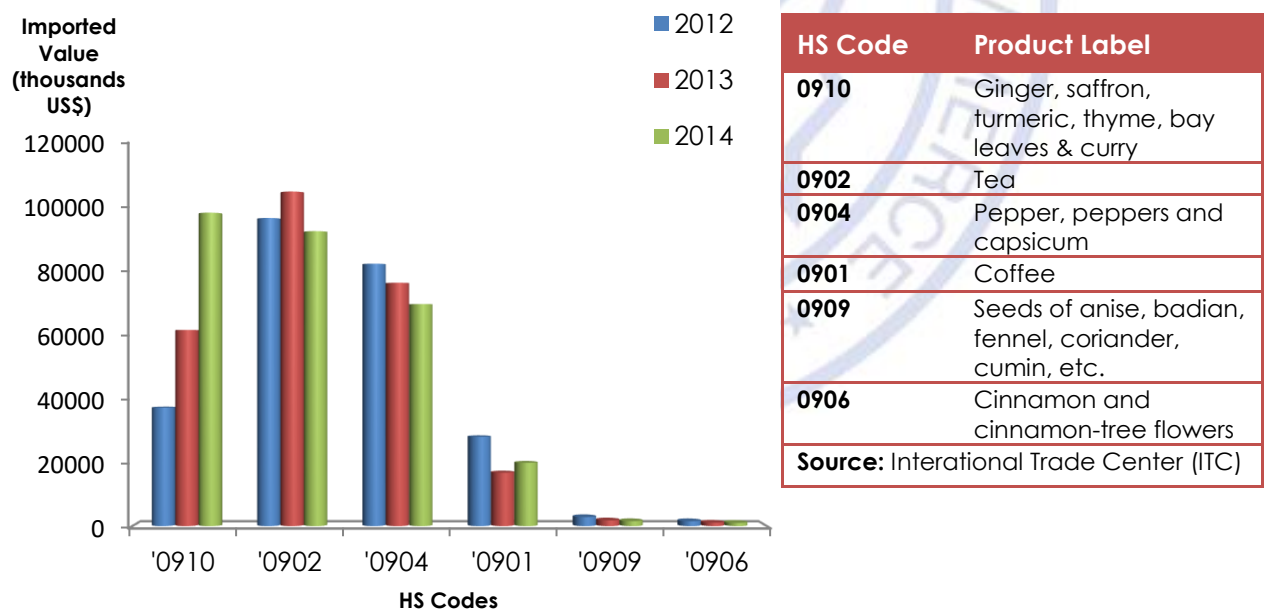


China has a long tradition for spices since its early times. With a climate that favors their cultivation and a strong economy for the past years China has remained the largest supplier of spices to the US market.

Compared with other commodities in the category of "coffee, tea, mate and spices" as categorized in the Euromonitor International Report, HS Code 0910 is highly exported to the USA from China for the period 2010 – 2014 with a strong positive trend.

Tea, coffee and peppers are goods which are also highly imported to the US from China as indicated in Figure 4 below. The export of spices (under HS Code 0910) from China follows a steady increasing pattern during the last three years in comparison to the other commodities.

Figure 4 | Bilateral Trade between USA and China for Coffee, Tea, Mate and Spices (HS Code 09)

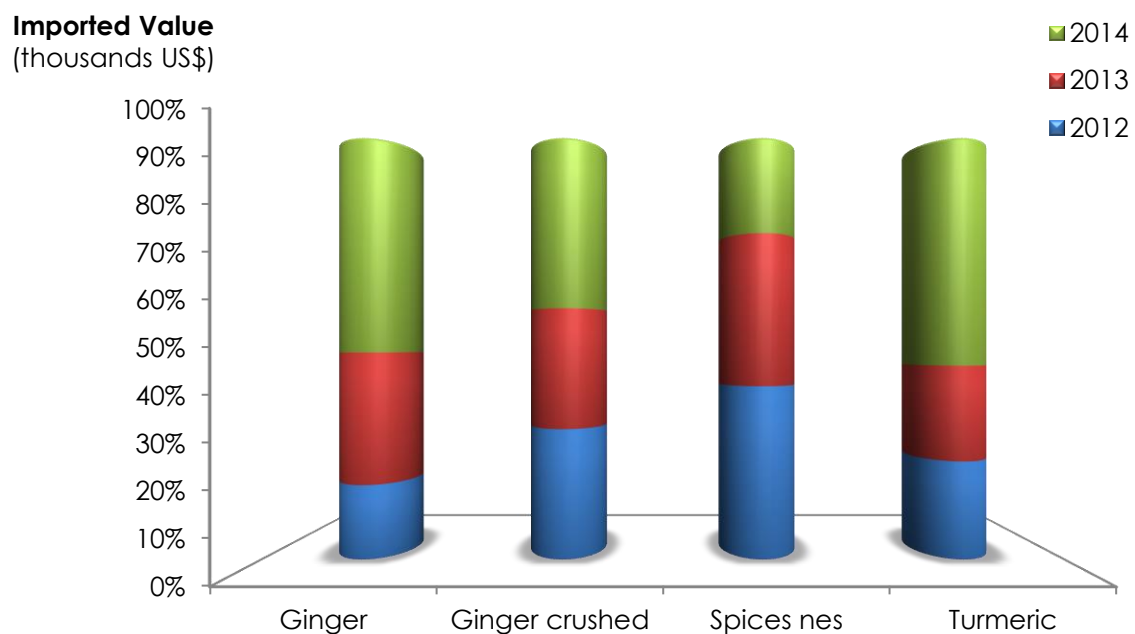


Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

Pepper, peppers and capsicum are also highly traded between the two countries but in contrast to spices, the past three years have marked a declining trend. Tea (HS Code 0902) presents a relatively high and stable trade pattern.

HS Code 0910 is broken down into its HS Codes in Figure 5 for the same time period, presenting the bilateral trade pattern for the most highly traded spices between USA and China.

Figure 5 | Bilateral Trade between USA and China



Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

Evidently, ginger in its multiple forms (both processed and unprocessed) is the most popular spice amongst American consumers and therefore the one with the highest imported value. Figure 5 indicates a positive empirical trend for the imported value of ginger in its unprocessed form (HS Code 091011), which has tripled from 30000 (\$) in 2012 to 90000 (\$) in 2014.



Ginger in its crushed or grounded form (HS Code 091012) then follows. Most other spices that fall into this category, such as turmeric and saffron, have a much smaller contribution towards the total imported value from China.

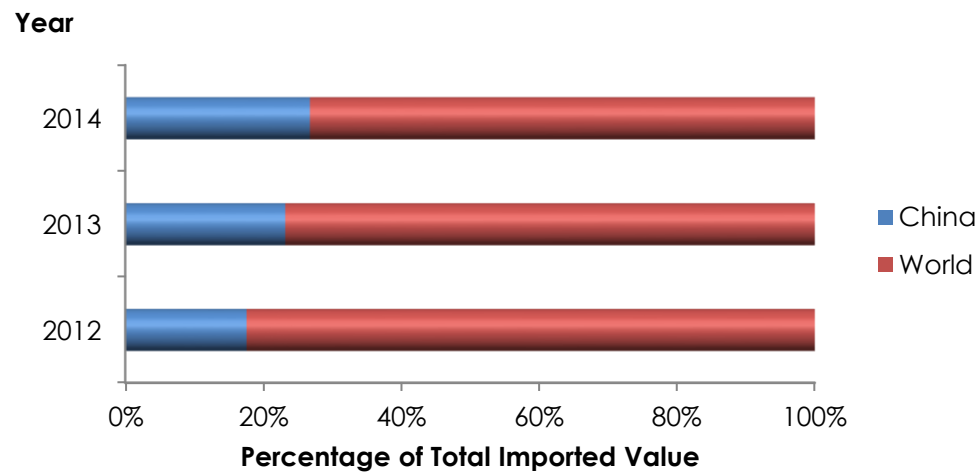
Saffron is one of the most expensive spices mainly because of its very intensive labor harvesting process but also because the crocus that makes saffron makes very little use of it. Therefore is often substituted with cheaper ones such as turmeric and as a result saffron doesn't rank so highly amongst US consumers. The most popular food in which saffron is used is in different variations of cooked rice such as in Mexican recipes.



Turmeric is also found in this category but in 2014 it has shown a marginally positive trend in comparison to the two previous years, even though overall it remains relatively insignificant in imported value.

When examining the relationship between the percentages of the total imported value for China relative to that of the total world imports, Figure 6 indicates that China contributes just over 20% of the total value imported for 2014 for HS Code 0910.

Figure 6 | USA Imports: China vs. World



Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

India

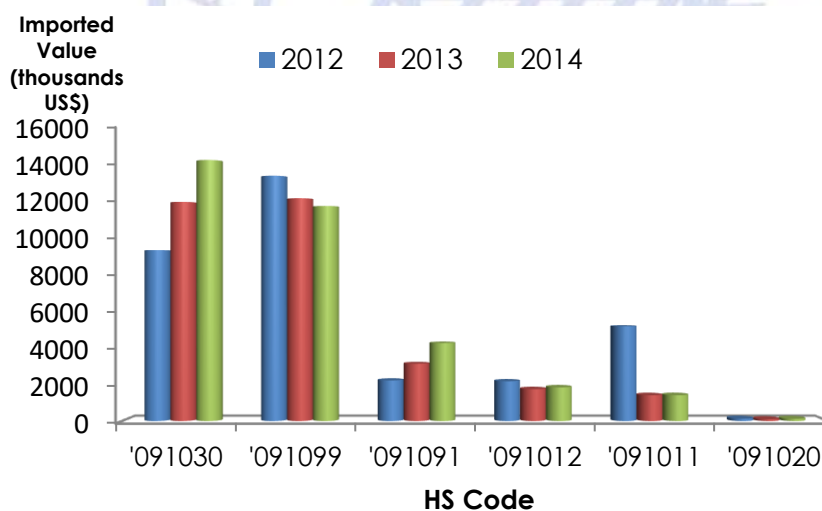


Since ancient times India is considered as the home of spices and has become known as the “Land of Quality Spices” or the “Spice Garden of India”. 75 spices out of 109 listed by International Standardization Organization are produced in India, most of which are exported. India exports more varieties of spices to the US market in comparison to China and thus is able to maintain a dominant position in the US importing market.

As a member of the five major emerging national economies (BRICS) or newly industrialized states, India's growing economy helps it sustain the second position amongst the exporting countries within the spices market. India's economy has been growing at an average growth rate of approximately 7% annually for the last twenty years.

Figure 7 below, represents the most highly imported spices under HS Code 0910 from India to the US market in order of decreasing value between 2012 and 2014.

Figure 7 | Bilateral Trade between USA and India



HS Code	Product Label
091030	Turmeric (curcuma)
091099	Spices nes
091091	Mixtures of two/more products
091012	Ginger: crushed or ground
091011	Ginger: neither crushed nor ground
091020	Saffron
Source: Interational Trade Center (ITC)	

Source: International Trade (ITC) calculations based on UN COMTRADE Statistics



Turmeric is marginally the most highly traded commodity in 2014, in contrast with the two previous years where the spice under the category "spices nes" (HS Code 091099) seemed to be more popular amongst US consumers. The plants in this sub-code vary from dill (categorized under herbs) to curry powder and thyme; ingredients commonly used in cooking, bay leaves and cinnamon.

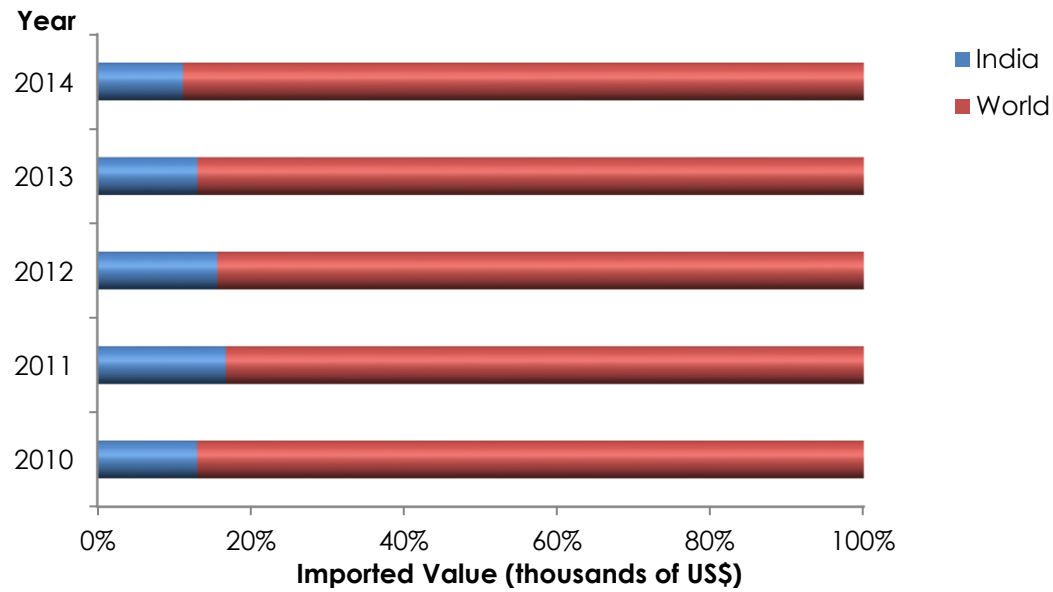
Turmeric presents a steady increase, which is expected since as previously stated, it is the cheap substitute for saffron which accounts for only a minimal percentage of trade. Relatively interchangeable with saffron is believed to have many medicinal properties including the cure of Alzheimer's diseases, for the heart and also for the treatment of various allergies. Turmeric shares many of these medical benefits; the difference however is mainly in the taste.

Spice	Retail Average Price/Kg	Flavor	Color	Medicinal benefits
Turmeric	\$ 3.25	mild	yellow	Cancer
Saffron	\$ 1, 500	strong	yellow	Depression, Alzheimer's

Ginger both in its unprocessed and processed forms is traded between India and the USA but its imported value is not high and is equal to approximately one quarter that of turmeric.

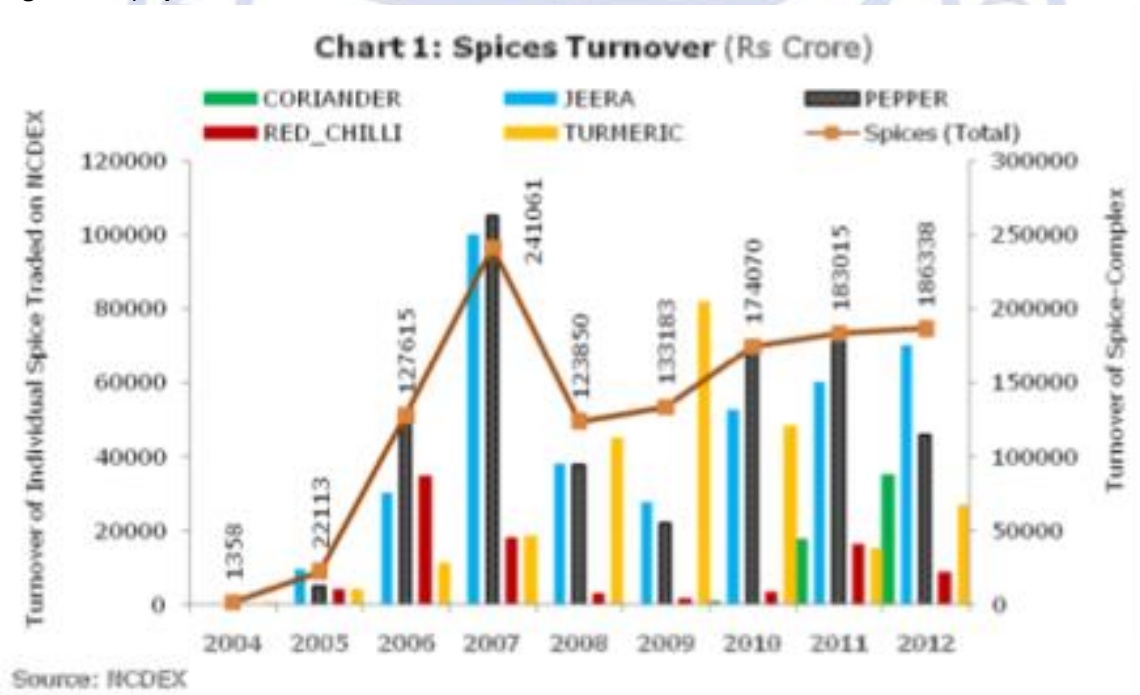
When comparing the imported values for HS Code 0910 for India and the world, it is evident from Figure 8 that India's contribution to the US importing spice market is significant. The trend presented a peak in 2011 and has since remained relatively steady for the past five years.

Figure 8a | USA Imports from India vs. World



Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

Figure 8b | Spices Turnover 2004 - 2012

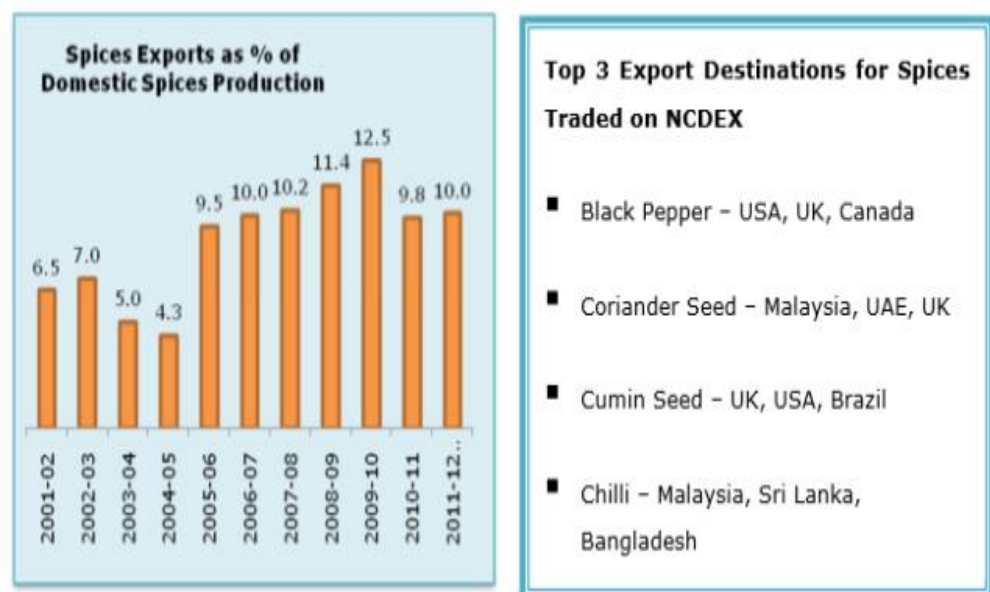


Source: NCDEX Report

Figure 8B gives a complete overview of the Indian market for spices for the period 2004 – 2012, which peaks in 2007. The two following years presented an extremely significant decline in turnover; however this trend is mainly a severe consequence of the recession which hit the international markets. The spices market in India is now on the way to recovery with pepper, turmeric and Jeera being the dominating products, while the turnover from Red chili has declined. The market for Coriander on the other hand seems to be expanding.

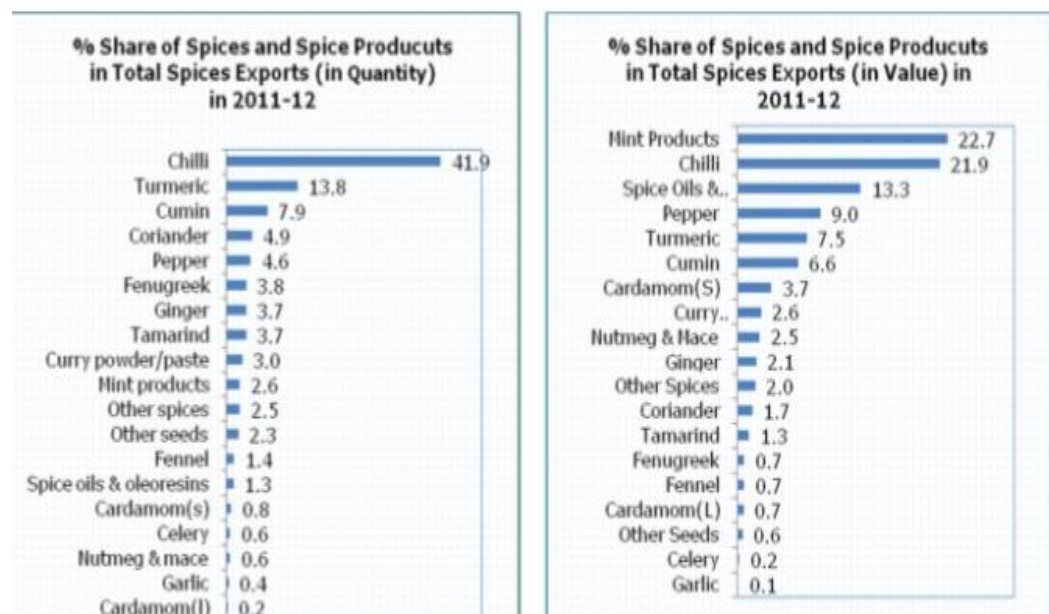
The figure below presents an overview of Indian exports as a percentage of the total domestic production. On average over the last decade the trend is positive at around 10% of total production, indicating that most is consumed nationally and only a small proportion is exported. Indian cooking and daily life makes significant use of spices and since the population is 1.29 billion, large quantities are required to satisfy demand. The figure also summarizes the main exported spices and the major destinations importers of each.

Figure 8c | Export details of Spices from India to the World



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Source:
NCDEX
Report



Turkey



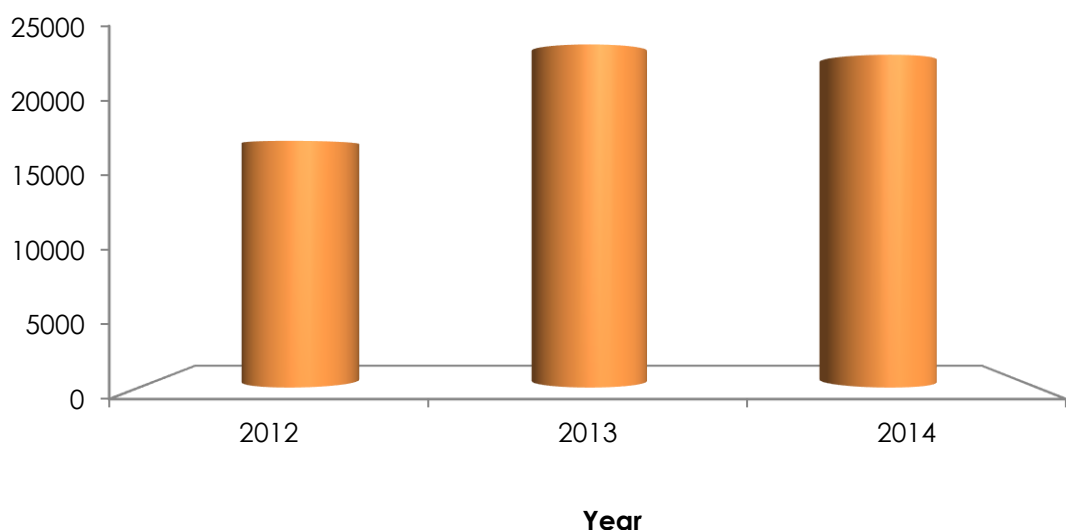
The third most substantial exporting market is Turkey. Turkey manages to hold this competitive position while primarily trading spices which vary in their form and categorized as nowhere else specified. They summarized in the table below. "Spices nes" is by far the most highly traded category of spices that are imported from Turkey to the USA in terms of imported value; figure 9 represents this relationship.

It is this unique composition that keeps Turkey between the top exporting nations. In addition, the imported value for the rest of the imported spices is relatively insignificant in monetary terms, as it is deduced when comparing the imported values in figures 9 and 10.

Saffron holds the second position and it is also due to its increased monetary value as a raw material able to keep a relative strong position. The US market seems to have a preference towards the saffron from Turkey than that of India regardless of the high cost of the spice.

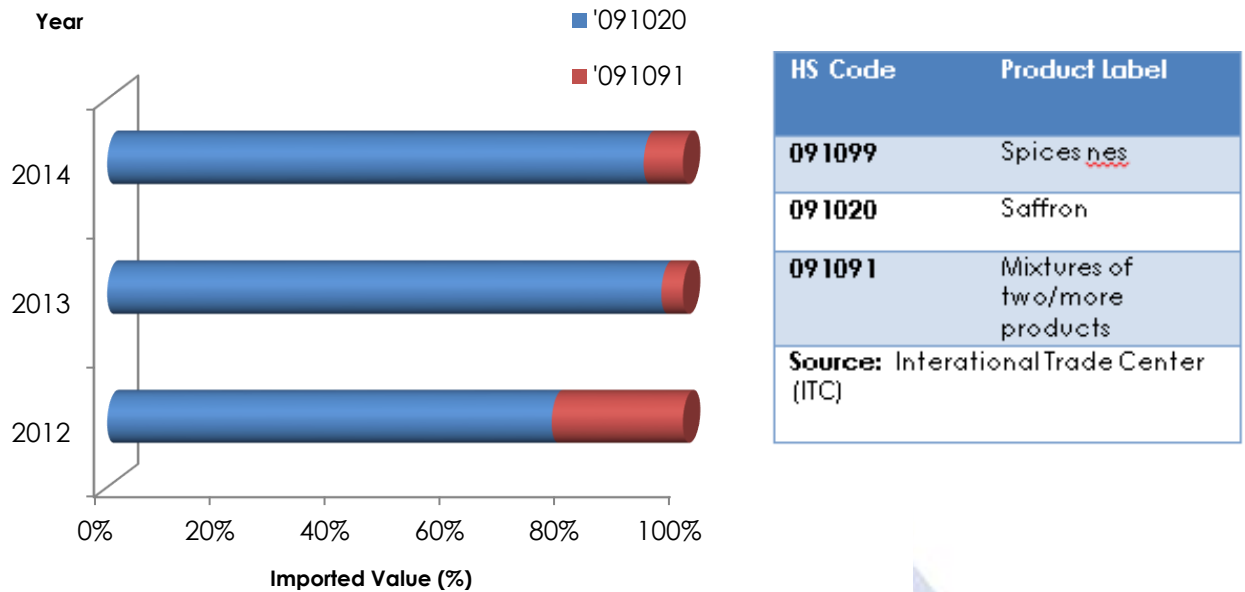
Figure 9 | Bilateral Trade for Spices nes (HS Code 091099) between USA and Turkey

**Imported Value
(thousands US\$)**



Source: UN Census Bureau Statistics

Figure 10 | Bilateral Trade between USA and Turkey

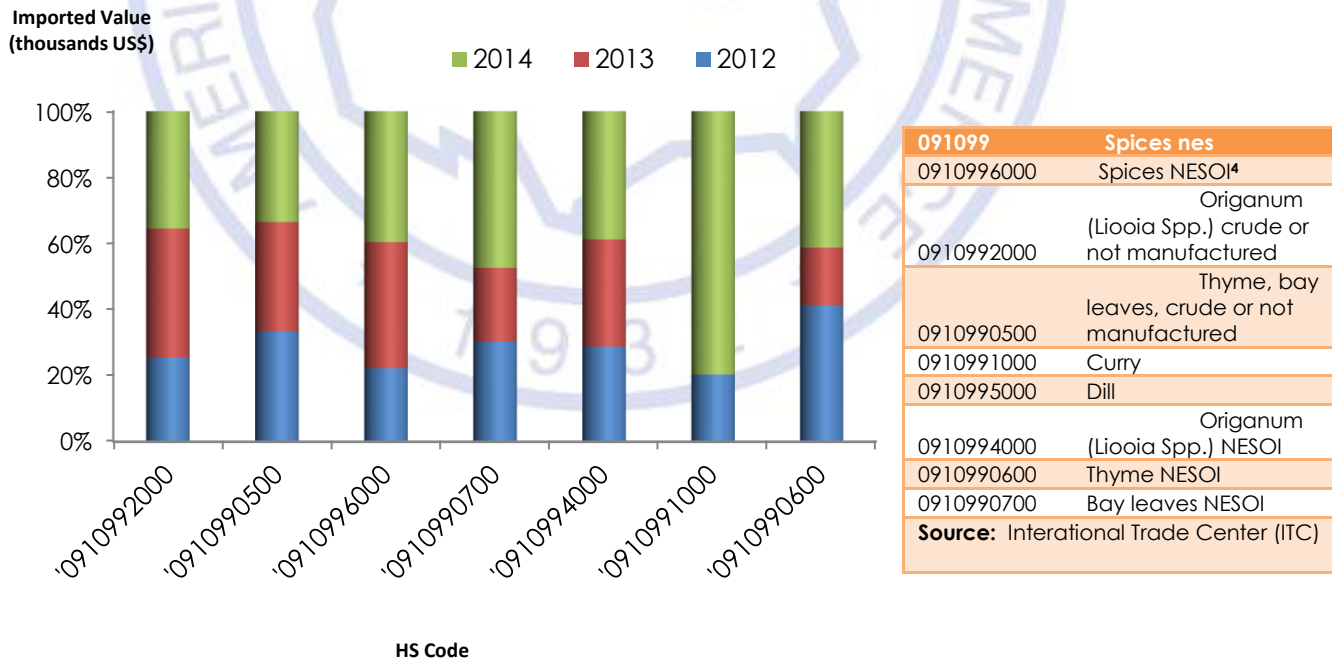


Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

Figure 11 summarizes the bilateral trade pattern for the different spices found in category “spices nes”. The breakdown of this sub-category indicates that oregano and thyme both in its crude and manufactured forms are the two herbs which are mostly imported from Turkey to the United States.

Figure 11 | Bilateral Trade between USA and Turkey for Spices nes (HS Code 091099)

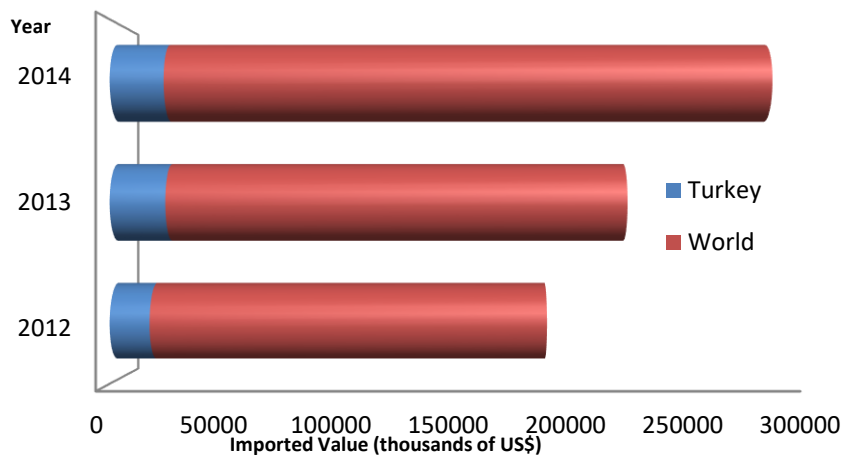
31



Source: ITC calculations based on UN COMTRADE statistics

⁴ Not Elsewhere Specified or Included

Figure 12 | USA Imports Turkey vs. World



Source: ITC calculations based on UN COMTRADE Statistics

Figure 12 shows the proportion of the imported value of exports from Turkey for HS Code 0910, in comparison to the total value of imports in the USA market from the world. As it is expected Turkey is not the most dominating exporter but it is steadily capturing an increasingly larger percentage of the market share each year. The characteristics mentioned above, make Turkey an extremely appealing market to look into particularly because of its dependency on saffron to remain competitive in a niche market.

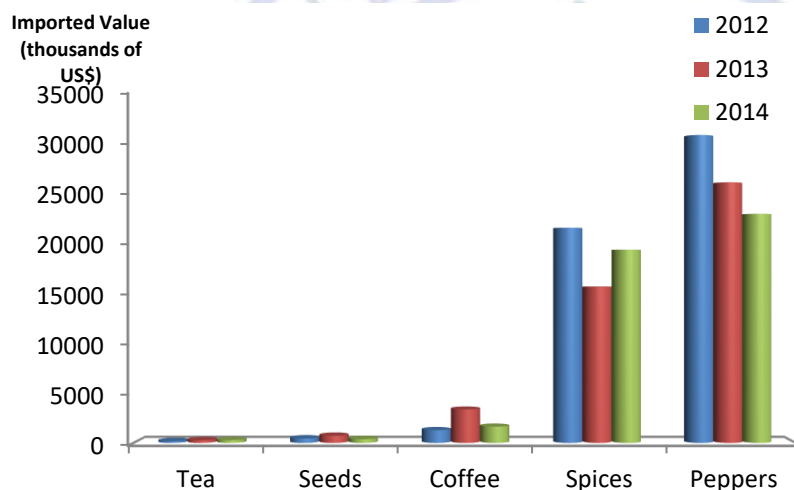
Spain



Spain is competing with major global economies and producers of the spices market and has still managed to maintain a stable position over the years within the top-five exporting countries of spices to the US market. Additionally Spain is the only western European player and the larger producer in Europe of spices even though itself is a net importer; has an increasingly high attractiveness index with a growing trend of total consumption between 2005 and 2009 (FAOSTAT, 2010).

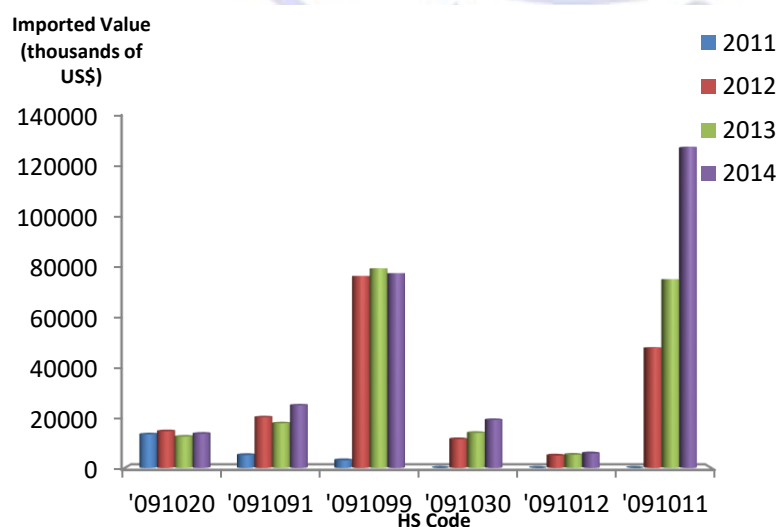
Bilateral trade between Spain and the USA for spices under the HS Code 09 is represented in Figure 13. The HS Codes 0904 (Pepper, peppers and capsicum) and 0910 (Ginger, saffron, turmeric, thyme, bay leaves & curry) are the most highly traded, while coffee, seeds and tea less so.

Figure 13 | Bilateral Trade between USA and Spain (HS Code 09) apart from 0910



Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

Figure 14 | Bilateral Trade between USA and Spain for HS Code 0910



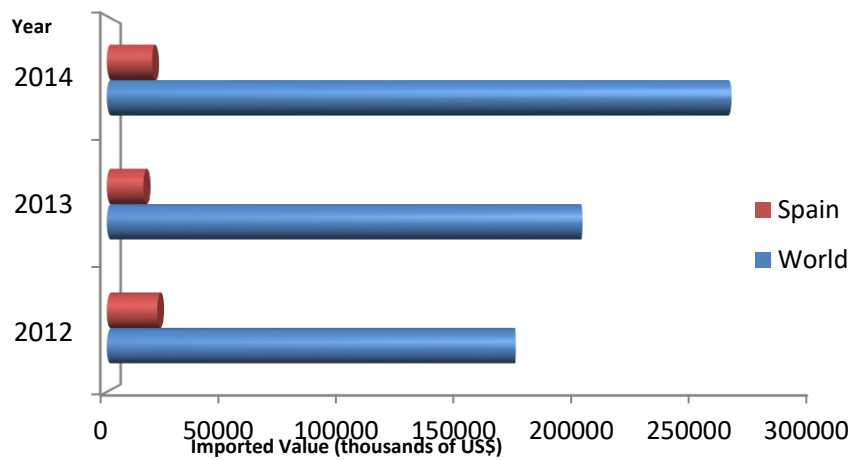
HS Code	Product Label
091011	Ginger: neither crushed nor ground
091099	Spices nes
091091	Mixtures of two/more of the products
091030	Turmeric (curcuma)
091020	Saffron
091012	Ginger: crushed or ground

Source: International Trade Center (ITC)

Source: ITC calculations based on UN COMTRADE statistics

Ginger in its unprocessed form is the most highly traded spice in this category, followed by spices nes. Saffron and turmeric are less traded products between Spain and the USA, mainly because of competition Spain focuses on exporting ginger.

Figure 15 | USA Imports Spain vs. World (HS Code 0910)

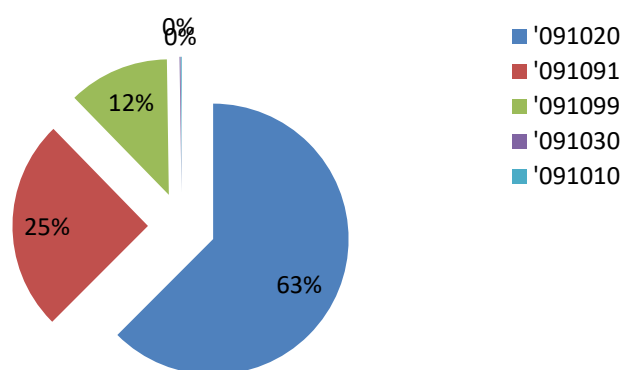


Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

In our market of interest, Spain is the only European economy that is competitive in the US importing market for spices and stands in fourth place amongst its Asian competitors with a significantly smaller market share.

Spain's exporting market is similar to that of India, in the sense that it is reliant on a number of different products to remain competitive, although it does heavily trade ginger. The past years demonstrate a significantly increase in the imported value for ginger in its unprocessed form (HS Code 091011) and for spices which are not elsewhere specified (HS Code 091099), the imported values however are much lower and have remained relatively stable over the time period. Figure 16 below graphically presents the contribution of the total exporting market by HS Code for 2014 showing more than 60% of the importing market coming from saffron and 25% of the market from mixtures of spices.

Figure 16: Imports from Spain in 2014



Source: ITC calculations based on UN COMTRADE statistics

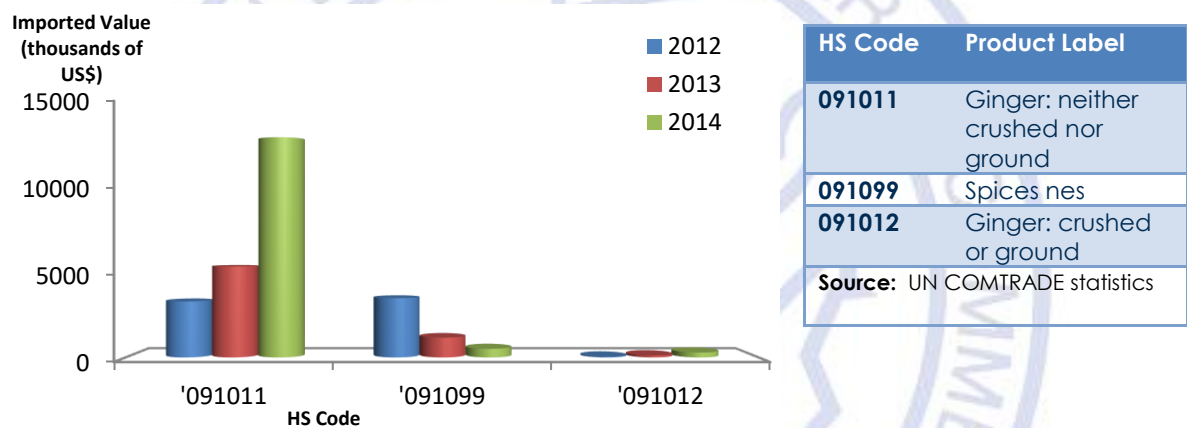
Peru



As the only Latin American major exporting country, Peru holds the fifth position in the importing market for spices to the USA. One of the world's fastest growing economies, characterized by a high level of foreign trade; however it is not particularly known for its spices which are not found amongst its major exports.

In contrast copper, pharmaceuticals and machinery are amongst the dominating exports of Peru. Peru is another market that succeeds to hold a relatively dominant position within the US spice importing market for the last three years, with an oligopolistic structure, that is to say the export of ginger in its unprocessed and processed forms and spices which are under the HS Code 091099.

Figure 17 | Bilateral Trade between USA and Peru



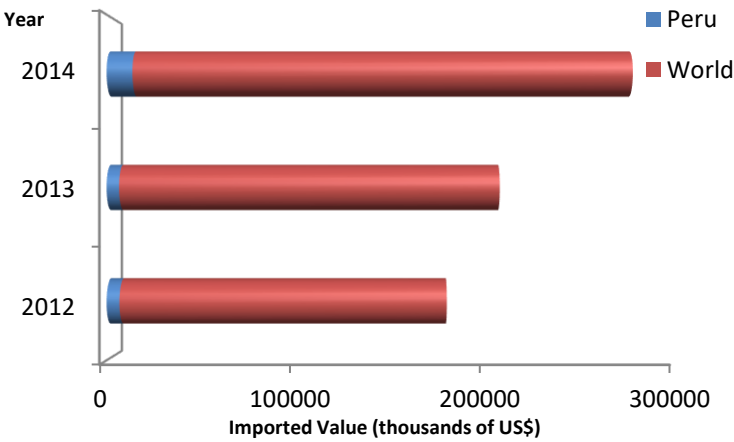
35

Source: ITC calculations based on UN COMTRADE statistics

For ginger in its unprocessed form (HS Code 091011) the imported value in 2014 has more than doubled compared to its value in 2013 and the two previous years, indicating a rapidly growing demand from US consumers. Even though overall ginger is amongst the most highly traded spices and can be found in the US market from other origins that imported from Spain is becoming increasingly popular amongst US consumers. Ginger in its processed form (grounded or crushed), is found in the third place of the exporting market. Spices nes, (spices which are not put under any other category), is the second most highly imported HS Code from Peru to the USA, with approximately one third of the imported value compared with ginger.

Compared with the total imports for HS Code 0910 from the world, Peru holds a relatively small percentage of the total value imported in the US market as demonstrated in Figure 18, in comparison to the total value of USA imports from the world overall.

Figure 18 | USA Imports Peru vs. World

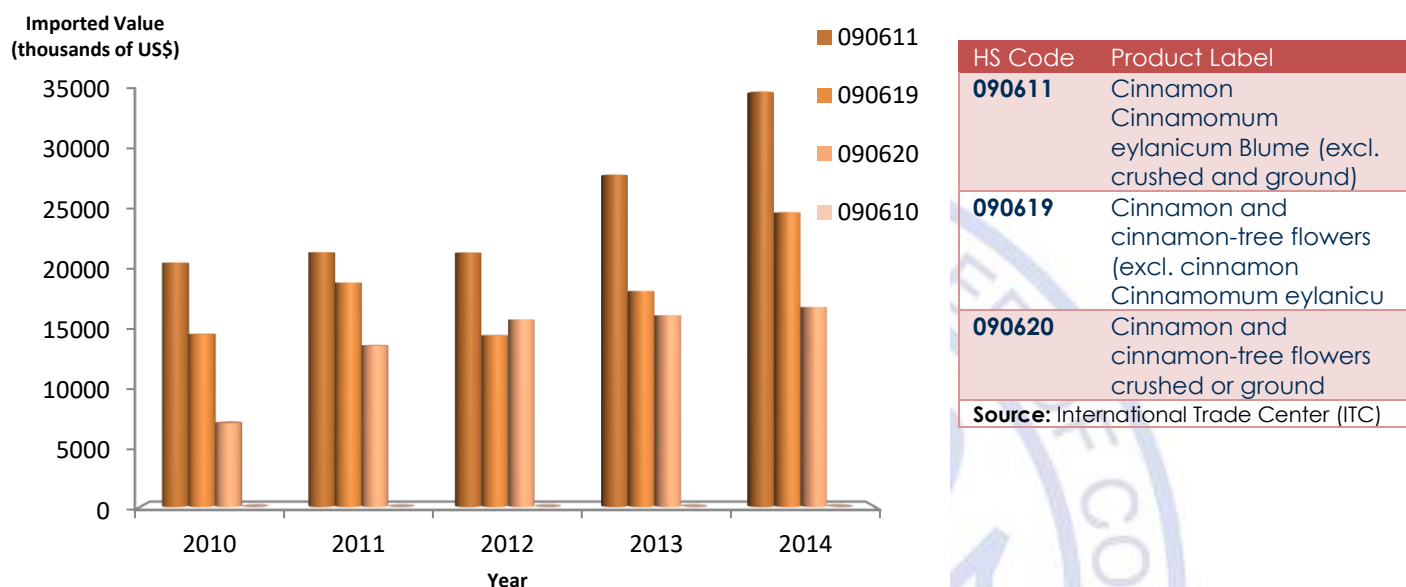


Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

II. Cinnamon (HS Code 0906)

The second harmonizing code which is analyzed because it is considered to be an important and most popular part of the spices family is cinnamon and its sub-categories which are summarized in the four sub-codes below.

Figure 19 | Imported Value of Cinnamon (HS Code 0906)



Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

Figure 19 indicates the imported value (in thousands of US dollars) of all the sub-categories of cinnamon during the period 2010 – 2014, as taken from the ITC statistics. For all the years it is observed that there has been a stable increase in the sub-code 090611 (Cinnamon Cinnamomum eylanicum Blume (excl. crushed and ground)). Cinnamon and cinnamon-tree flowers crushed or ground then follows.

The remaining two sub-codes for cinnamon either present an unstable trend or are insignificant in their value.

Table 3 below presents an overview of the main exporting countries to the US market in monetary terms measured in thousands of US dollars. Like is the case for sub-code 0910, the cinnamon market is also dominated by Asian exporters only in this case uniquely and there is no European presence amongst top competitors. The markets of India and China are common however Indonesia, Sri Lanka and Vietnam are the most dominating exporters of cinnamon to the US market. Indonesia on its own represents more than 50% of the total imported value in 2014.

These three markets are analyzed in more detail in the next section explaining how such a small market can have strong competition. It is noticed below that each major exporting nation specializes in the exportation of a single differentiated HS Code.

Table 3: Imported Value by Country to the USA**HS Code:** 0906 (Cinnamon and Cinnamon-tree flowers)**Unit:** thousands of US\$

Exporters	2010	2011	2012	2013	2014
World	42,232	53,976	51,665	62,297	76,592
Indonesia	24,643	34,515	29,219	33,630	48,728
Sri Lanka	12,116	12,898	14,685	16,429	17,730
Vietnam	3,670	3,965	5,012	7,161	8,172
China	805	1,560	1,589	1,105	1,056
India	557	557	529	517	389

Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics

Additionally the top-five exporters in terms of volume are presented in Table 4 in decreasing order. The values rank similarly to that of the imported values for 2014, with the only difference being Vietnam and Sri Lanka having exchanged positions.

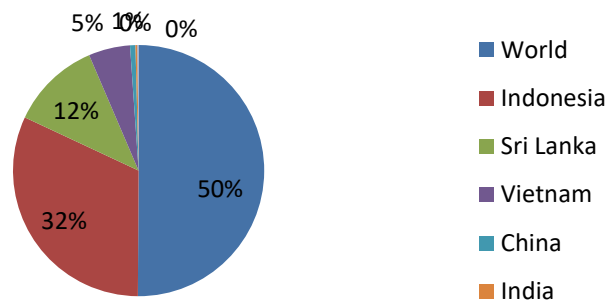
Table 4: Imported Quantity by Supplying Country to the USA**HS Code:** 0906 (Cinnamon and cinnamon-tree flowers)**Unit:** tons

Exporters	2010	2011	2012	2013	2014
World	24,637	26,078	23,747	28,005	29,021
Indonesia	20,105	21,865	19,216	23,148	23,681
Vietnam	1,721	1,782	1,997	2,727	2,924
Sri Lanka	1,966	1,368	1,527	1,533	1,831
China	360	694	746	374	382
India	302	213	104	118	85

Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics

Figure 20 indicates that the smaller importers of the cinnamon market make up exactly 50% of the total imported value and the strongest competitors of the market are the three Asian markets, Indonesia, Sri Lanka and Vietnam and Germany being the only European competitor in the market with a minimal contribution.

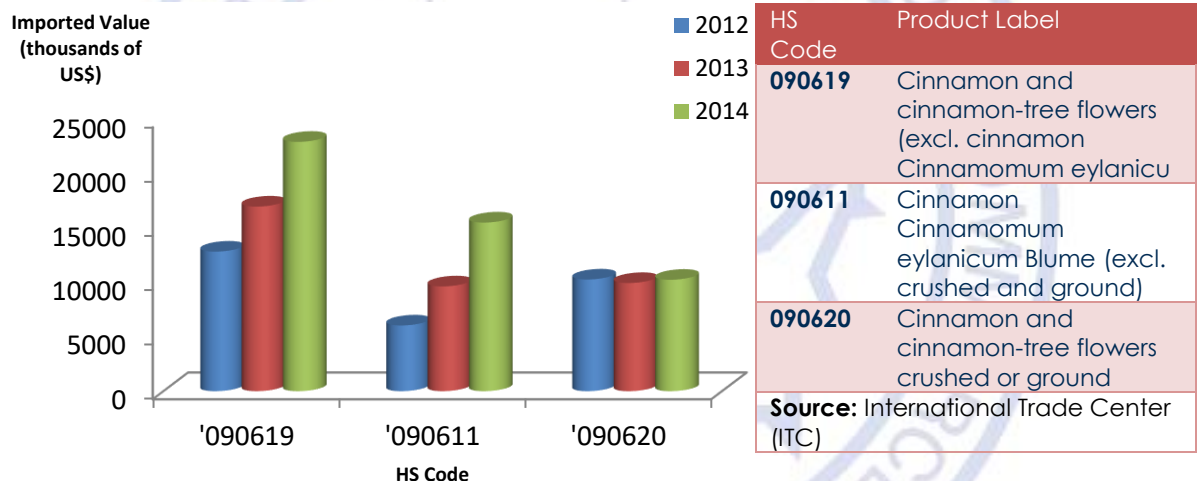
Figure 20 | Market Share 2014 for Cinnamon (HS Code 0906)



Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

The bilateral trade pattern for each category of cinnamon is presented in Figure 21. The data shows an overall increasing trend in the imported value particularly for the first two HS Codes and a relatively stable imported value for HS Code 090620 which consists of the crushed or grounded product.

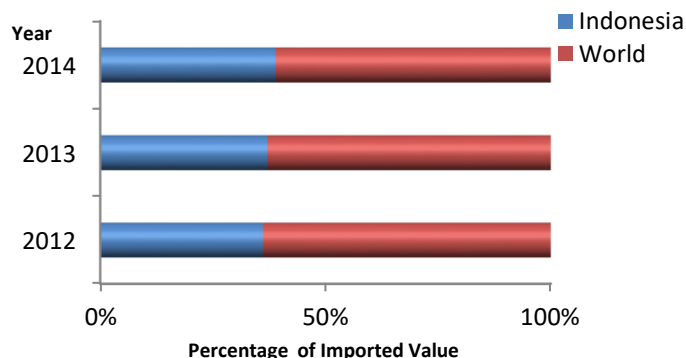
Figure 21 | Imported Value of Cinnamon 2012-2014 (HS Code 0906)



Source: UN Census Bureau Statistics

Figure 22 represents the ratio of imports from Indonesia in relation to that of the world the data shows that for 2014 nearly 40% of the total imports of cinnamon in the US market, suggesting that the market structure is progressively more competitive every year. The major suppliers of cinnamon to the US supply market are presented below.

Figure 22 | USA Imports Indonesia vs. World (HS Code 0906)



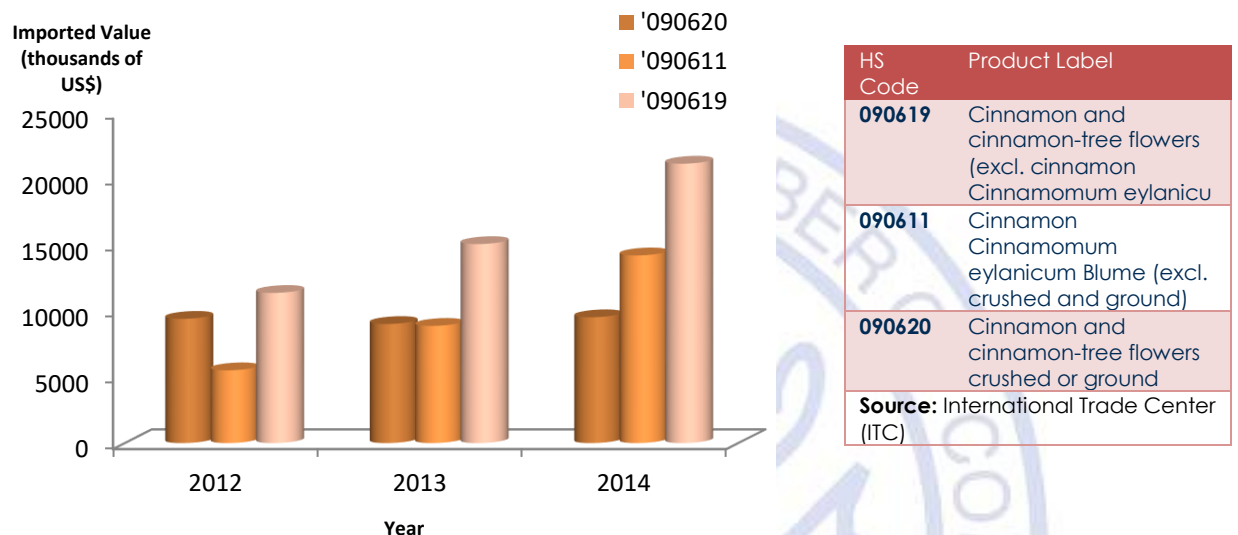
Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics

Indonesia



Indonesia is the world's largest exporting nation of cinnamon, the bilateral trade between USA and Indonesia is graphically presented below for the years 2012 – 2014. Recently it has managed to obtain the most competitive position in the world exporting market and that of the US.

Figure 23 | Bilateral Trade between USA and Indonesia

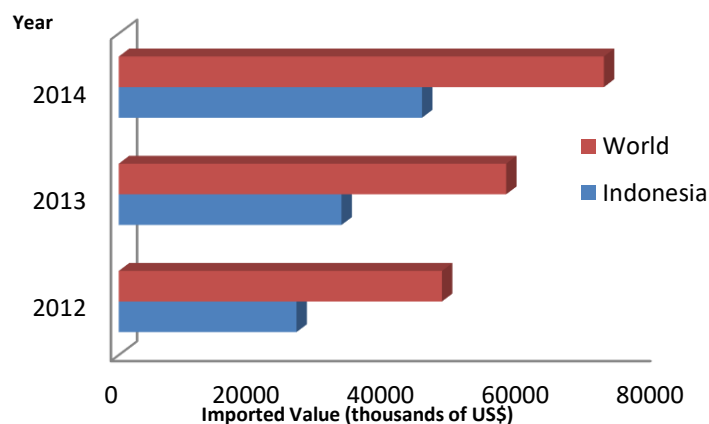


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Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics

Each year presents an increase in the imported value of all the sub-codes traded between the two countries, indicating an increase in the demand for cinnamon originating from Indonesia in the US. The most popular sub-code is Cinnamon and cinnamon-tree flowers, which is followed by Cinnamon Cinnamomum eylanicum Blume. Figure 24 clearly indicates dominating the ratio of imports coming from Indonesia as a percentage of the total imports from the world. Additionally Indonesia is it important to mention that the Indonesian cinnamon market is still expanding considerably each year.

Figure 24 | USA Imports Indonesia vs. World



Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

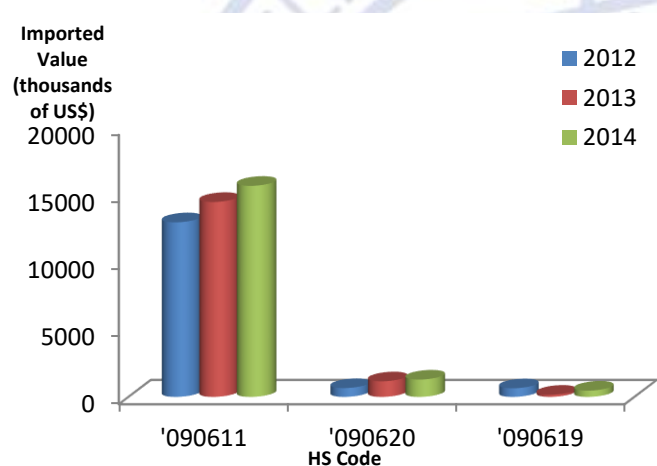
Sri Lanka



In the past Sri Lanka was the world's largest producer and exporter of Cinnamon (Ceylon cinnamon), however today has been overtaken by the Indonesia's exporting market. Still today the quality of the plant is considered of much higher quality than that of the other major exporters.

In addition Sri Lanka is highly dependent on the industry for employment, for example an estimate of around 350,000 families make their living from the cinnamon industry who are being employed to peel the bark of the from the cinnamon trees. Moreover apart from the US exporting market, Sri Lanka also exports to the some countries of Latin America such as Mexico, Peru and Columbia according to the International Trade Center.

Figure 25 | Bilateral Trade between USA and Sri Lanka HS Code 0906



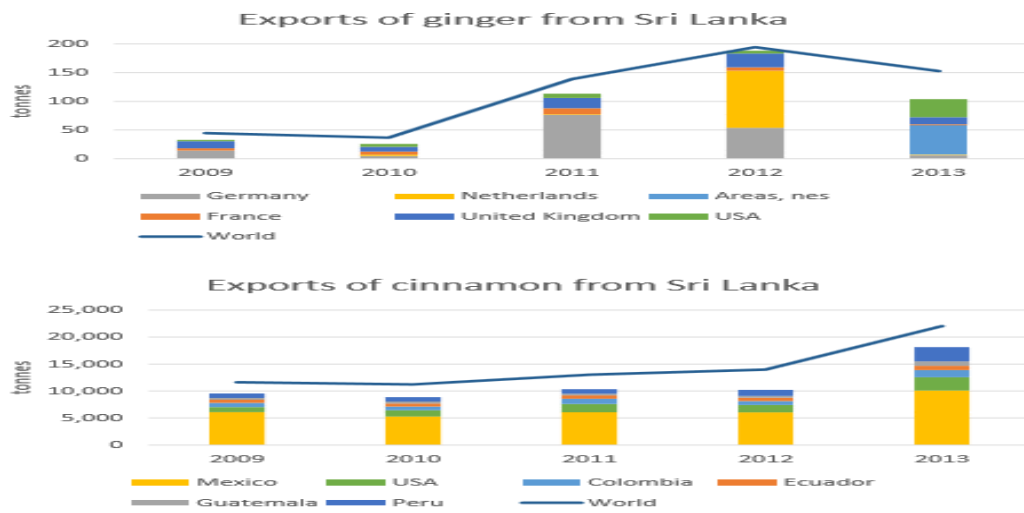
HS Code	Product Label
090611	Cinnamon Cinnamomum eylanicum Blume (excl. crushed and ground)
090620	Cinnamon and cinnamon-tree flowers crushed or ground
090619	Cinnamon and cinnamon-tree flowers (excl. cinnamon Cinnamomum eylanicu

Source: International Trade Center (ITC)

Source : UN Census Bureau Statistics

Sri Lanka relies on the HS Code 090611 for its exports to the US market which is cinnamon in its unprocessed form (i.e. neither crushed nor grounded) for the past three years. The Sri Lankan market's strong point is found in this HS Code. The other two exported HS Codes for cinnamon stated above are imported into the US market in relatively insignificant amounts.

The Sri Lankan exporting market of cinnamon and ginger are compared in the diagram below. The market for cinnamon is overall growing, the majority of which is exported to Latin American countries. The market for ginger on the other hand is declining after a peak in 2012, the majority of which is exported to Europe.



Source: International Trade Center, Market Insider, Spices

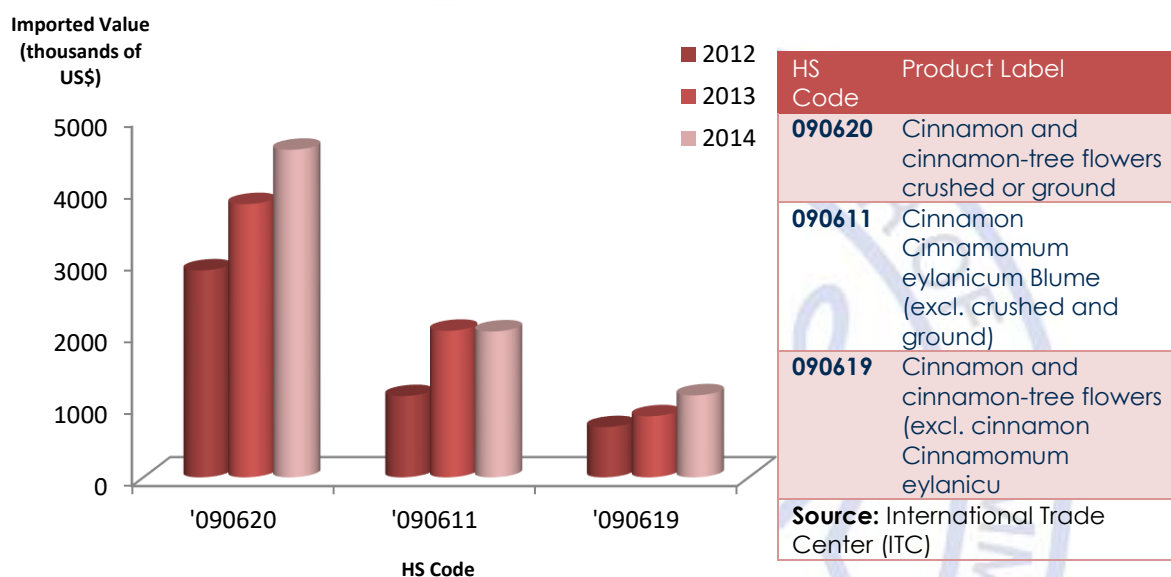


Vietnam



Vietnam's competitive advantage in the US supply market lies in sub-code '090620 which is cinnamon in its processed form (crushed or grounded), thus differentiating itself in order keep a strongly position within the particular market during the period 2012 - 2014.

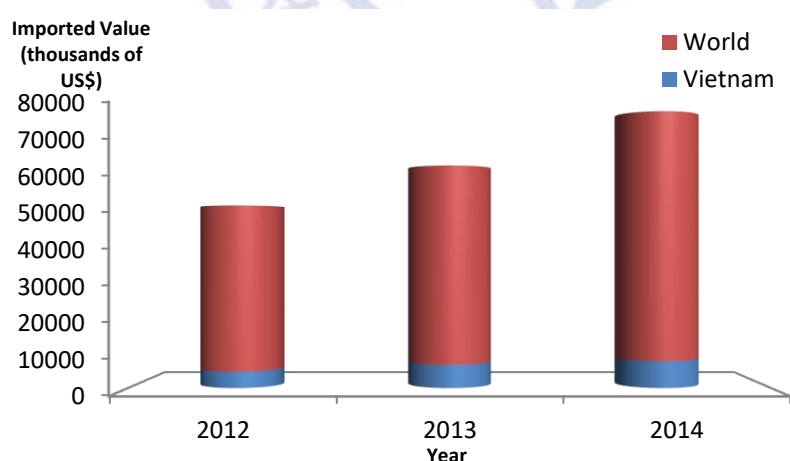
Figure 27 | Bilateral Trade between USA and Vietnam



43

Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

Figure 28 | USA Imports from Vietnam vs. World



The figure compares the imported values of the imported value from Vietnam and from the world overall. In 2014 there has been a significant increase of approximately 20000 thousands of dollars from the imported value of the world. While the imported value from Vietnam has relatively stayed at the same levels of just under 20% of the total imported values. This relationship indicates a market that is potentially open to new rivalry.

Source: International Trade Center (ITC) calculations based on UN COMTRADE Statistics

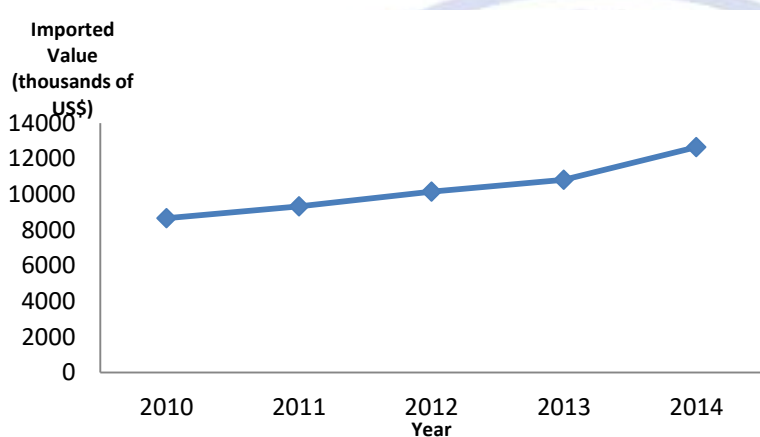
2.3. Herbs

In this section the trade balances and bilateral trade patterns for some of the most popular herbs amongst US consumers are analyzed below.

I. Parsley (HS Code 0712906500)

Parsley is one of the most popular herbs used mainly in cooking in many cuisines particularly in the Mediterranean. An overview of the US importing market and an analysis of the German importing market is presented in more detail.

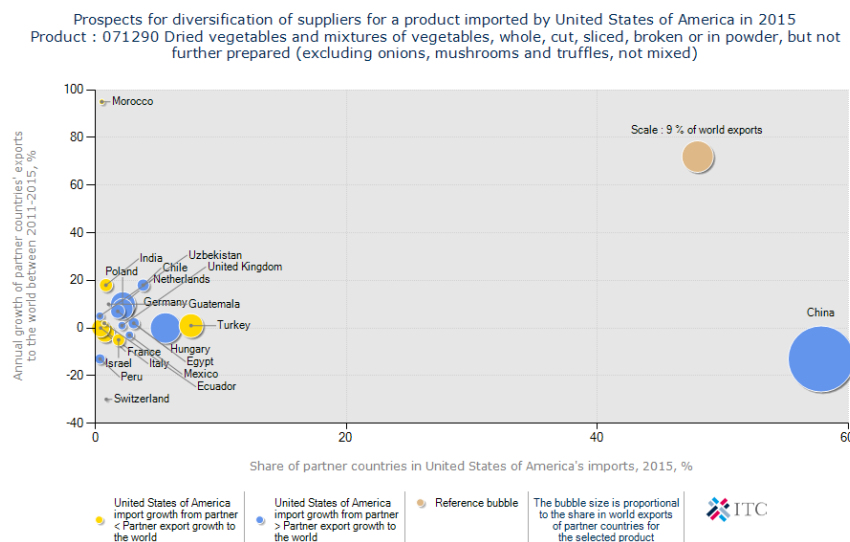
Figure 29a | USA Imported Value for Parsley 2010 – 2014 (HS Code 0712906500)



Source: International Trade Center (ITC)

Parsley is a popular herb used amongst US consumers and as the imported values indicates that demand is increasing on an aggregate level. The increased attractiveness for citizens to change their eating habits towards healthier diets such as the Mediterranean and Asian cuisines has played a significant part in this pattern. The use of parsley to make pesto in the Italian cuisine is one popular example of its use. Usually it is found dried either whole, cut, slices or in powder but not processed.

Figure 29b | Diversification of Suppliers in the USA for Dried Vegetables (2014)



Source: International Trade Center (ITC)

Table 5 and 6 represent the imported values and quantities of parsley under HS Code 0712906500 respectively. They both indicate a relatively mixed market structure which is dominated by European and Asian participants.

Table 5: Imported Value by Country to the USA					
HS Code: 0712906500 (Parsley, dried, whole, cut, sliced, broken or in powder, but not further prepared, NESOI)					
Unit: thousands of US\$					
Exporters	2010	2011	2012	2013	2014
World	8,662	9,333	10,153	10,822	12,658
Germany	2,704	3,292	3,186	3,441	3,931
Egypt	1,177	1,375	1,609	1,931	2,859
Israel	2,356	2,700	1,765	1,522	1,773
Netherlands	410	618	1,614	1,167	1,410
United Kingdom	566	417	1,104	1,290	1,319
Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics					

The US market for parsley is mainly dominated by European and Middle Eastern markets. Given that parsley can easily grow and does not need particular conditions, it is an expected trend. However the above mentioned countries do not share similar climate conditions. Germany, the Netherlands and the United Kingdom are countries of northern Europe which have a wetter and colder climate, while Israel and Egypt have a Mediterranean climate.

Table 6: Imported Quantity by Supplying Country to the USA					
HS Code: 0712906500 (Parsley, dried, whole, cut, sliced, broken or in powder, but not further prepared, NESOI)					
Unit: kilograms					
Exporters	2010	2011	2012	2013	2014
World	1912,951	1971,490	2035,434	2340,965	3024,365
Egypt	357,352	427,833	515,386	574,597	910,231
Germany	572,545	581,291	549,041	587,798	787,157
Israel	454,943	499,958	284,205	266,344	308,706
Mexico	30,165	46,466	14,760	193,079	300,428
United Kingdom	101,152	67,498	181,215	223,759	264,647
Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics					

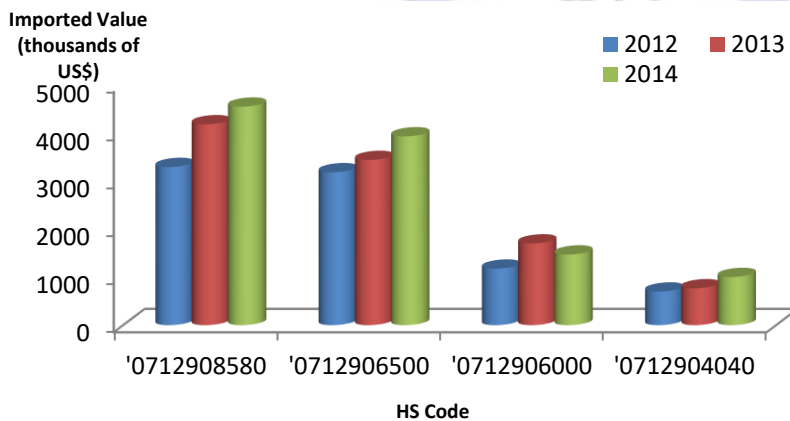
Table 6 summarizes the top markets in terms of volume. Mexico is the only Latin American country which is presented. Additionally, Mexico is not found amongst the top competitors in the terms of value; possibly indicating an inferior quality product and unpopularity amongst US consumers.

Germany



The German market holds the highest imported value indicating a strong preference amongst the US consumers. It is interesting to analyze since it is a European economy, but unlike Greece it does not have a mild, Mediterranean climate. The figure below indicates the high popularity amongst of parsley in comparison with other HS Codes of the same category; it is the second most highly traded sub-code.

Figure 30 | Bilateral Trade between Germany and the USA for Top Herbs



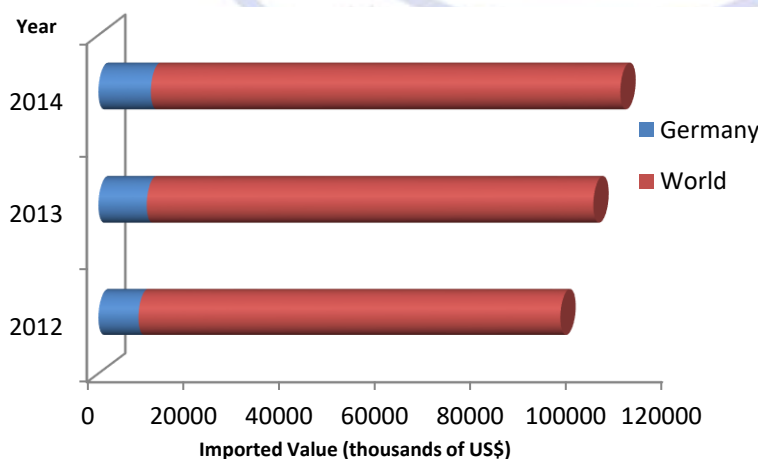
HS Code	Product Label
0712908580	Vegetables & mixtures of vegetables, dried, whole, cut, sliced, broken or in powder, NESOI
0712906500	Parsley dried, whole, cut, sliced, broken or in powder, but not further prepared, NESOI
0712906000	Fennel, marjoram, parsley, savory and tarragon, dried, crude or not manufactured
0712904040	Garlic, dried (except powder or flour), whole, cut, sliced or broken, but not further prepared

Source: International Trade Center (ITC)

Source: International Trade Center (ITC)

The relationship for the imported value for Germany in relation to that of the world is illustrated in the diagram below.

Figure 31 | USA Imports Germany vs. World for Parsley (HS Code 0712906500)

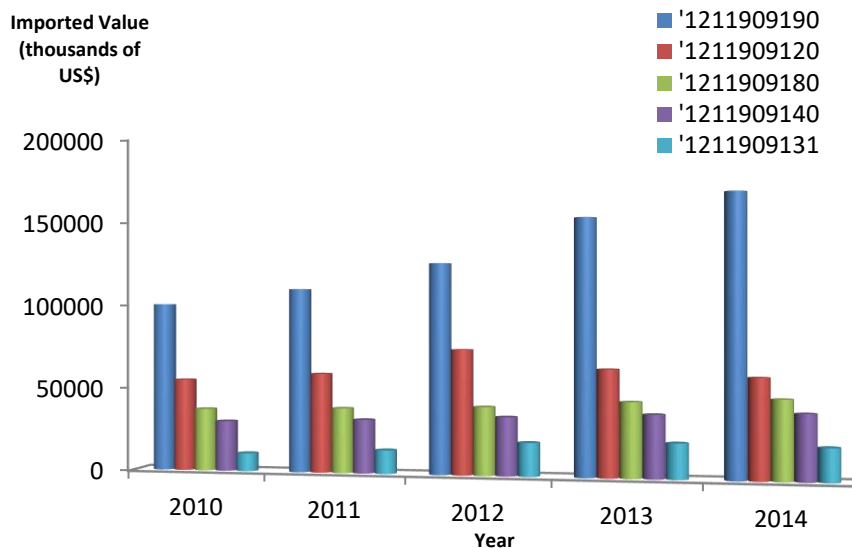


Source: International Trade Center (ITC)

II. Basil (HS Code 121191)

Basil is another herb which is becoming increasingly popular in the US market. However as it is deduced from the diagram below, within its category (under HS Code 121191) basil is not as popular as other plants which are used primarily in pharmacy, perfumery, (HS Code 121191), have anesthetic or therapeutic properties (HS Code 1211909120) or are used as herbal teas or infusions (HS Code 1211909180).

Figure 32a | USA Imported Value of Basil (HS Code 121191)



Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics

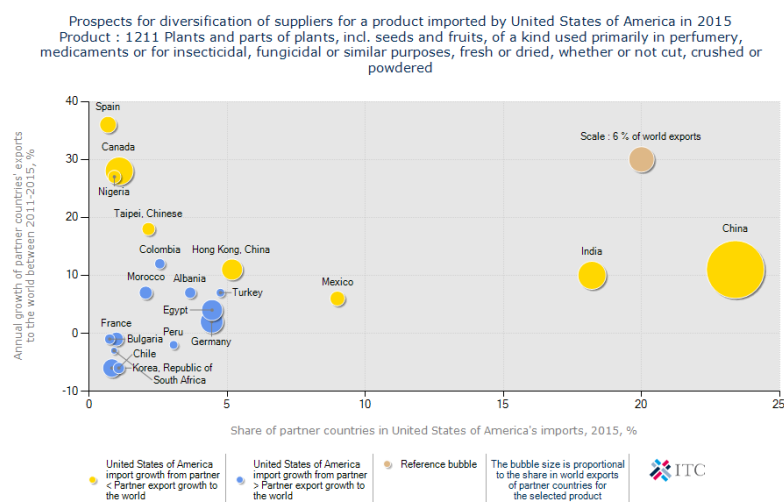
HS Code	Product Label
1211909190	Other plants and parts of plant, NESOI, used primarily in perfumery, in pharmacy or in for in septicidal, fungicidal or similar purposes, fresh or dried
1211909120	Psyllium seed husks, fresh or dried, having anesthetic, prophylactic or therapeutic properties and principally used as medicaments or ingredients
1211909180	Plants and parts of plants used as herbal teas or herbal infusions (single spices, unmixed)
1211909140	Basil, fresh or dried, whether or not cut, crushed or powdered
1211909131	Substances having anesthetic, prophylactic or therapeutic properties and principally used as medicaments or ingredients thereof, fresh or dried, NESOI

Source: International Trade Center (ITC)

Tables 7 and 8 clearly indicate the domination of Latin American exporter to the US market both in terms of volume and monetary values. Mexico is stable in first position and Ecuador on the other hand has shown a significant increase in its exporting values. The other exporters remain relatively stable in their rankings, taking into account that Columbia has a significant increasing in the monetary value as well as in the quantity exported over this five year period.

The diversification of suppliers to the US market in figure 32b is greatly dominated by an Asian presence, who are key exporting economies on a global scale, for HS Code 1211.

Figure 32b | Diversification of Suppliers in the US for HS Code 1211 - Plants and parts of plants,



Source: International Trade Center (ITC)

Table 7: Imported Value by country to the USA

HS Code: 1211909140 (BASIL, FRESH OR DRIED, WHETHER OR NOT CUT, CRUSHED OR POWDERED)

Unit: thousands of US\$

Exporters	2010	2011	2012	2013	2014
World	30,214	32,170	34,911	37,493	39,014
Mexico	12,227	13,017	16,301	37,493	16,061
Egypt	7,629	8,601	8,267	8,962	9,606
Colombia	1,511	3,313	5,648	6,682	6,523
Peru	2,581	2,175	1,774	2,239	1,641
Ecuador	131	417	615	514	1,614

Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics

One other point which is interesting to mention is the fact that Egypt is the only Middle Eastern country which is amongst the top exporters of basil. The climate is definitely a key factor which encourages this trend.

Table 8: Imported Quantity by Supplying Country to the USA

HS Code: 1211909140 (BASIL, FRESH OR DRIED, WHETHER OR NOT CUT, CRUSHED OR POWDERED)

Unit: Kilograms

Exporters	2010	2011	2012	2013	2014
World	8601,771	9299,238	9522,997	9657,539	9761,600
Mexico	3852,338	3972,420	4442,812	4044,086	4046,896
Egypt	3556,222	3894,820	3527,373	3753,875	3719,724
Colombia	228,517	585,790	993,931	1236,748	1342,514
Peru	403,980	324,235	248,393	1236,748	266,865
Israel	358,918	215,499	95,780	103,721	141,336

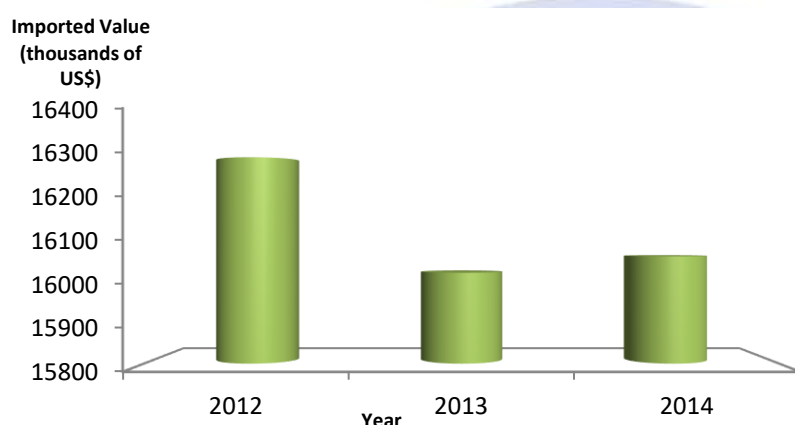
Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics



Mexico

One of the main exporters with approximately half of the imported monetary value and quantity in 2014, Mexico is still the strongest exporter to the US. However as the numbers indicate over the time period 2012 – 2014, the imported value has fallen and shows an unstable trend. This may possibly be explained by the competition coming from other markets such as Ecuador.

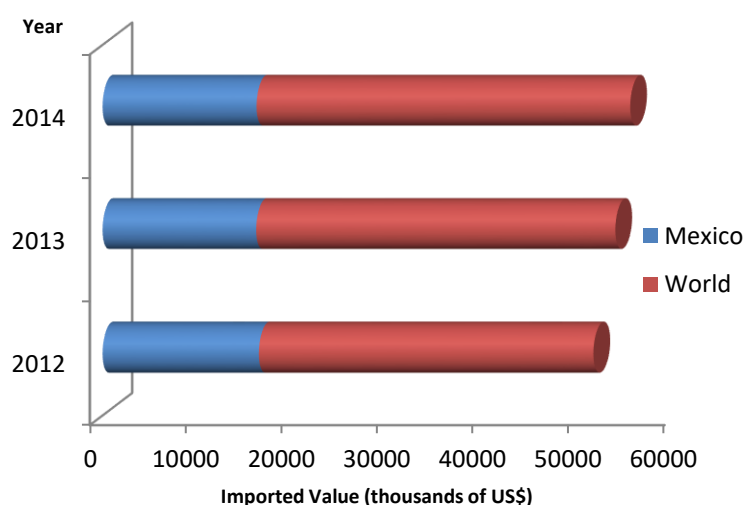
Figure 33 | Bilateral Trade between USA and Mexico of Basil (2012 – 2014)



Source: International Trade Center (ITC)

In any case, Mexico which is geographically closer to the United States of America continues to be number one exporter, exporting to the US approximately 20% of the total imported value.

Figure 34 | USA Imports Mexico vs. World



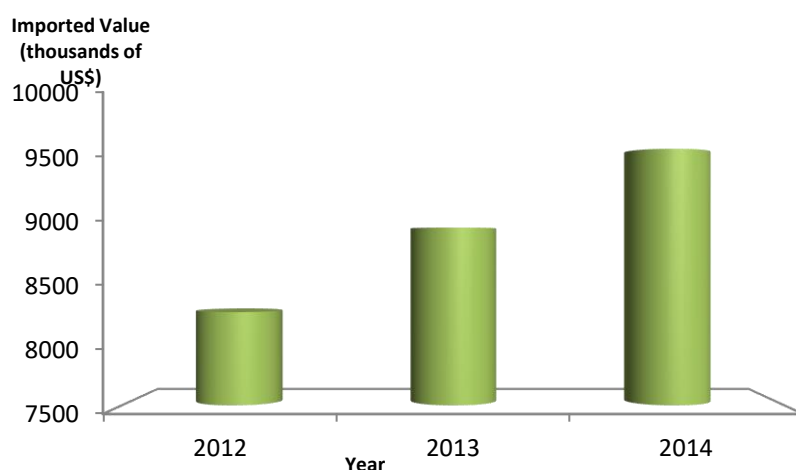
Source: International Trade Center (ITC)

Egypt



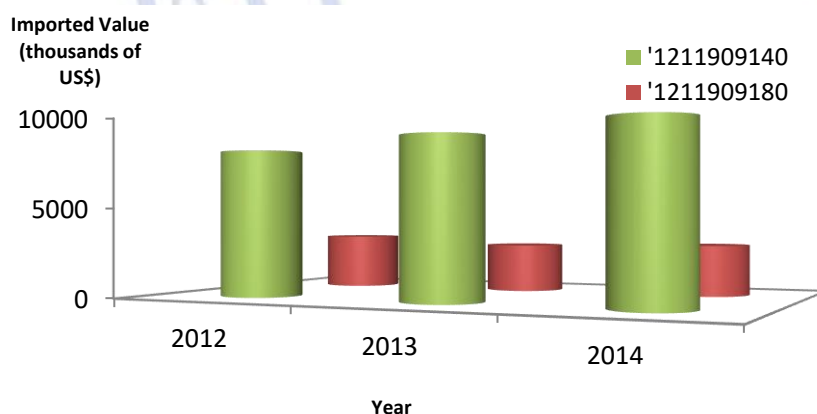
Egypt is the second largest exporting market which has shown a steady increase in its imported value of more than 1000 thousand dollars in two years, as can be seen from Figure 35 which presents the bilateral trade pattern between the two countries.

Figure 35 | Bilateral Trade between USA and Egypt for Basil 2012 – 2014 (HS Code 1211909140)



Source: International Trade Center (ITC)

Figure 36 | Bilateral Trade USA and Egypt Parsley/ other Plants used as Herbal Teas



HS Code	Product Label
1211909140	Basil, fresh or dried, whether or not cut, crushed or powdered
1211909180	Plants and parts of plants used as herbal teas or herbal infusions (single spices, unmixed)
Source: International Trade Center (ITC)	

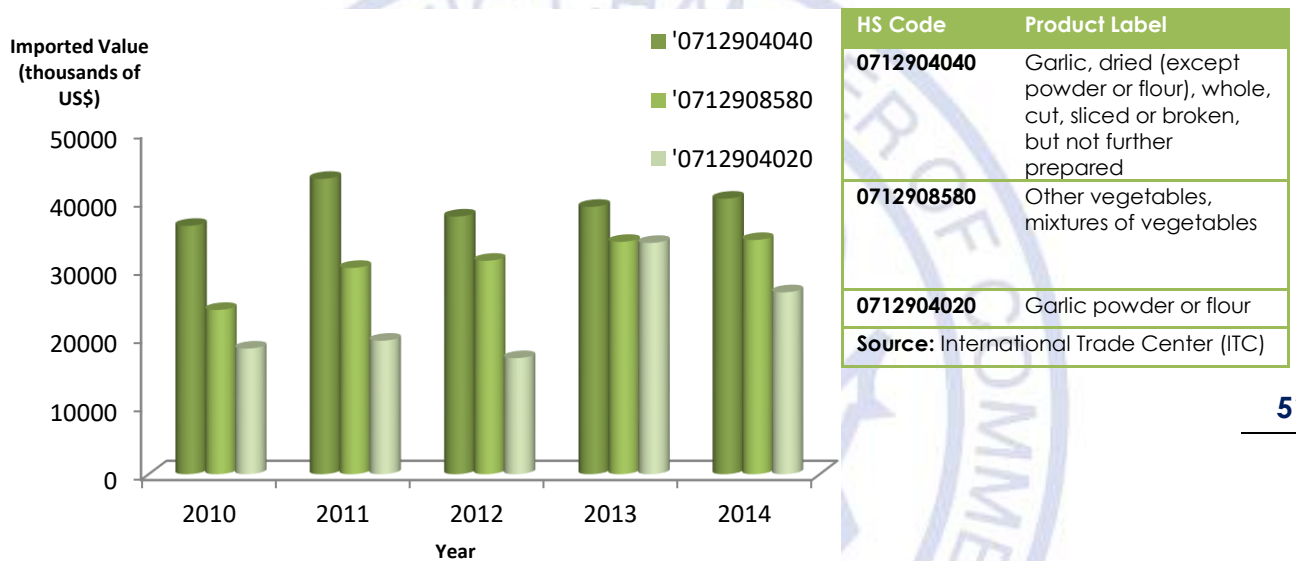
Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics

When making a comparison between basil and the HS Code 1211909180 defined as plants and parts of plants used as herbal teas or infusions basil is significantly a more popular herb.

III. Garlic (Under HS Code 07129040)

Garlic is another important ingredient in the Mediterranean and Greek cuisine and has numerous health benefits. Figure 35 illustrates the trade balance for the imported value of both sub-codes of garlic (0712904040 and 0712904020), overall indicating a high demand. The imported value in 2011 reached 45000 thousands of US dollars. The following years proved a minor decline in the imported value of whole dried garlic (HS Code 0712904040) which does not seem to be significant. Between 2010 and 2014 garlic in its powdered form under HS Code 0712904020 has presented an increase in popularity amongst US consumers, because of the increasing imported value.

Figure 37 | Imported Value for Garlic (2010 – 2014)



Source: US Census and UN COMTRADE

Table 9: Imported Value by Country to the USA

HS Code: 0712904040 (Garlic Dried (Except powder or flour) whole, cut sliced or broken, but not further prepared)

Unit: thousands of US\$

Exporters	2010	2011	2012	2013	2014
World	36,331	43,192	37,697	39,106	40,300
China	35,497	42,384	36,684	37,905	38,768
Germany	486	401	701	769	1004
Italy	124	127	110	159	168
Japan	0	0	0	170	167
India	112	248	125	80	114

Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics

Table 10: Imported Quantity by Supplying Country to the USA					
HS Code: 0712904040 (Garlic Dried (Except powder or flour) whole, cut sliced or broken, but not further prepared)					
Unit: kilograms					
Exporters	2010	2011	2012	2013	2014
World	30170,069	29278,288	25931,294	23659,354	24861,068
China	29561,034	28786,134	25221,398	22664,717	23257,842
Germany	390,014	221,410	532,063	593,040	1118,372
Japan	0	0	0	210,032	210,032
Italy	71,360	144,557	87,039	141,754	159,894
India	76,840	104,872	45,602	44,293	73,153
Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics					

The two tables above indicate a mixed market structure dominated by China and a strong presence of European and Asian exporting markets. It is interesting to note that Japan is a relative new entrant to this particular niche market in 2013. This strongly indicates the possibility of a newly expanding market.

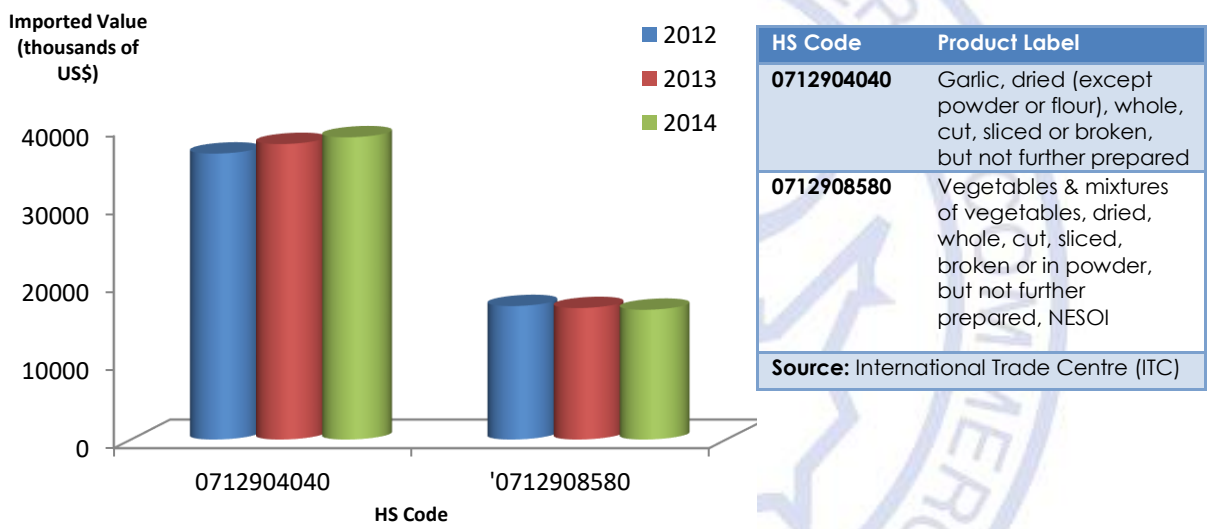
China



As the largest producer and exporter of garlic, producing approximately 66% of the total world production or 59 million metric tons annually, China is the most attractive market under the HS Code 0712904040. Annually China exports approximately 383,860 tones of garlic worldwide.

The two most popular sub-codes within this category are garlic dried cut and not further prepared and 0712908580 which contains a mixture of dried vegetables. In china alone the garlic industry is so big that it includes more than 200 corporations which specialize in the production and exportation of garlic. Garlic is used in numerous Chinese medicines to treat illnesses of the stomach and as a powerful antibiotic among others.

Figure 38 | Trade between USA and China for Garlic



Source: US Census and UN COMTRADE



IV. Pepper, Peppers and Capsicum (HS Code 0904)

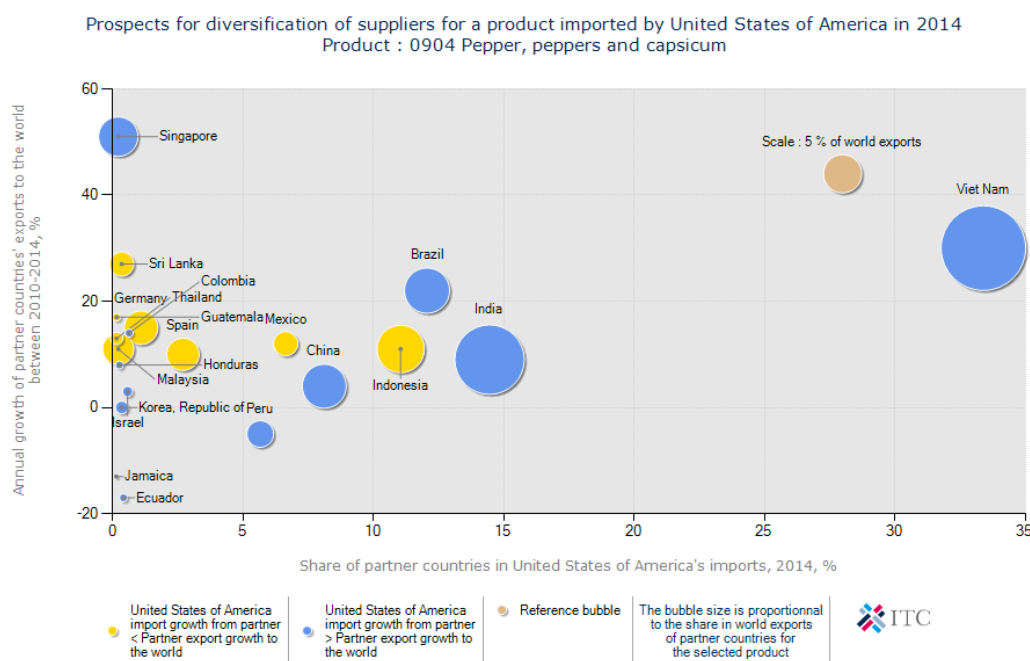
This category of plants and its sub-codes includes pepper as a seasoning and peppers as a fruit, they are analyzed below.

Peppers of the genus capsicum are edible peppers and their fruits are the bell peppers. Pimenta is another genus of flowering plants in the myrtle family. It is native to South America, Mexico, Central American and the West Indies, according to the "World Checklist of Selected family Plants". These countries also commonly use it in their everyday cooking.

This category also includes the Bell Pepper of the species Capsicum annum, otherwise known as Jon's Head and in Australia Capsicum. This type of pepper is grown in green, red, yellow, purple (lavender), vanilla and brown which are rarer. For these peppers to grow the climate has to be wet enough for the peppers to be moist but they are also sensitive to extreme wet conditions as well as to extreme temperatures. This type of pepper is native to Mexico, South and Central America, even though today China is the largest global producer followed by Mexico according to the US Department of Agriculture.

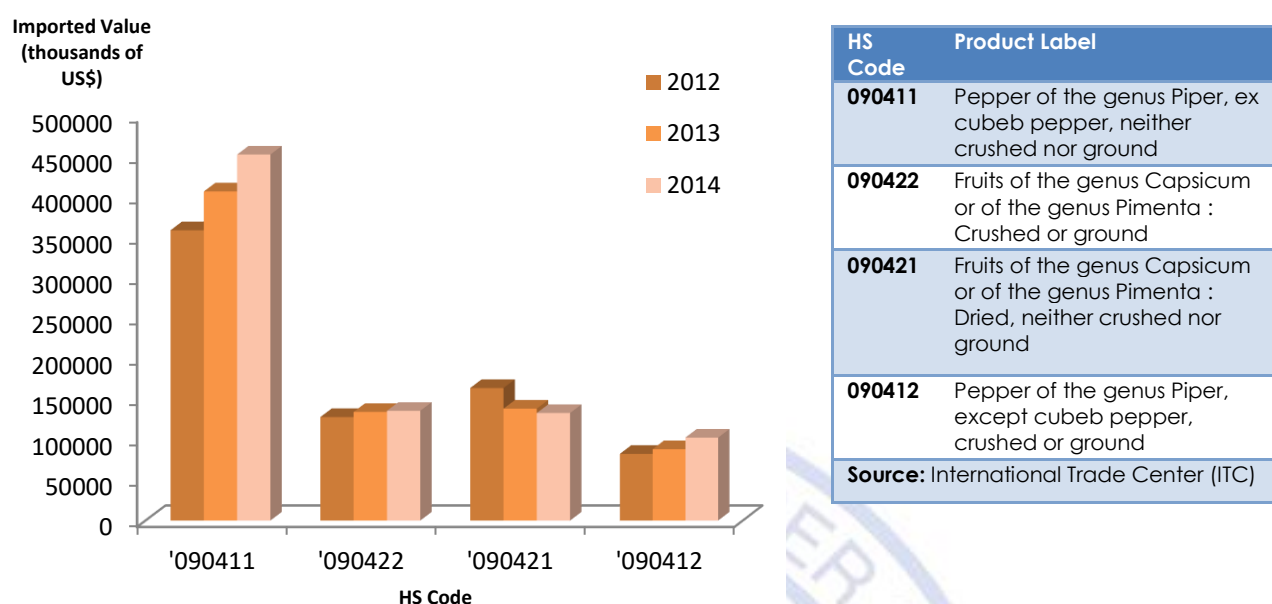
The main suppliers of peppers under the HS Code 0904 are presented below. Evidently, the Asian countries and Latin American have the strongest presence in the US supply market. There is limited presence from Europe.

Figure 39 | Diversification of Suppliers for Pepper, peppers and capsicum (HS Code 0904)



Source: International Trade Center (ITC)

Figure 40: Imported Value of Peppers and Capsicum (HS Code 0904)



Source: US Census and UN COMTRADE

Figure 40 presents the overview of top imported products of peppers. The pepper of genus Piper is the most highly imported sub-code in the US supply market, followed by the fruits of the genus Capsicum or Pimenta.

The only exporter which is not Asian is Brazil and is a market which has a significant place amongst its competitors. This trend indicates a preference of the Asian products amongst the US consumers but additionally, it also indicates a higher monetary value of the Asian imports which is a result of two factors. The first one concerns the higher transportation costs because of the geographical position and the second, indicates a product of higher value. Vietnam is important because it has shows a steadily increasing imported value each year, indicating a growing market for the production and importation of peppers to the US.

Table 11: Imported Value by country to the USA

HS Code: 0904 (Pepper, peppers and capsicum)

Unit: thousands of US\$

Exporters	2012	2013	2014
World	732,538	767,319	823,044
Vietnam	94,599	169,030	274,871
India	137,445	117,042	119,016
Brazil	59,961	84,167	99,281
Indonesia	182,279	150,699	90,961
China	79,136	71,050	66,850

Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics

Table 12: Imported Quantity by Supplying Country to the USA			
HS Code: 0904 (Pepper, peppers and capsicum)			
Unit: tons			
Exporters	2012	2013	2014
World	182,909	187,072	181,263
Mexico	33,760	38,685	38,073
Vietnam	12,401	23,451	34,278
India	35,172	31,272	32,006
China	21,152	19,788	18,746
Peru	23,980	17,202	15,878
Source: International Trade Center (ITC) calculations based on UN COMTRADE statistics			

In terms of quantity Mexico is the leading country which imports the most tons of HS Code 0904 to the US market. In geographical terms it is an expected pattern because the transportation costs are significantly lower than the imports which originate from the Asian continent.

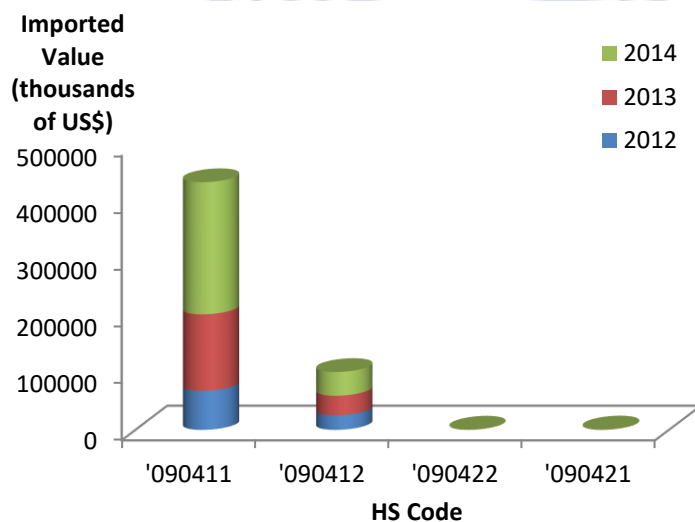
Vietnam



The Vietnam market is of primary importance to the US supply market for pepper. It is interesting to note that during 2014 the country has exported to the US market the two new HS Codes which means that the market is expanding and thus growing on an international level.

Previous to 2014, there were only two sub-codes imported to the US from Vietnam, which is the pepper of the genus Piper in its unprocessed form and crushed and grounded.

Figure 41 | Bilateral Trade between Vietnam and USA



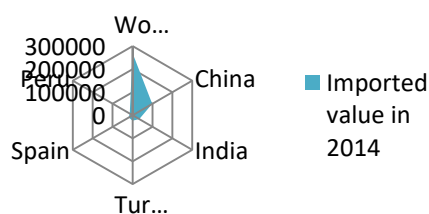
Source: TradeUSA- US CENSUS BUREAU – UN COMTRADE

HS Code	Product Label
090411	Pepper of the genus Piper, ex cubeb pepper, neither crushed nor ground
090422	Fruits of the genus Capsicum or of the genus Pimenta: Crushed or ground
090421	Fruits of the genus Capsicum or of the genus Pimenta: Dried, neither crushed nor ground
090412	Pepper of the genus Piper, except cubeb pepper, crushed or ground
Source: International Trade Center (ITC)	

2.4. Key Insights

- **Ginger** in its unprocessed form is **the predominantly imported spice** to the US market in 2014, amongst HS Code 0910
- Over the 5 year period 2010 – 2014, **saffron** presents **a relatively stable but low imported value**, due to its high price, compared with the other spices of the same category
- **India** exports **a wider variety of spices** to the US market in comparison to China and thus is able to maintain a dominant position in the US importing market.
- Spain is the largest producer of spices and peppers in Europe
- **Cinnamon** US importing market dominated by Asian economies i.e Indonesia, Sri Lanka, Vietnam, China and India.
- **Indonesia** capturing **more than 50%** of the importing market in 2014 in monetary terms. In terms of quantity Indonesia captures more than 75% of the importing country
- Parsely has **strong European players** Germany (31%) and is greatly divided in terms of market share with multiple small exporters.
- **Egypt and Mexico** holds 22,6% and 14% of the total importing market respectively
- The **total imported value of basil to the US has grown** by 58% between 2010 and 2014 in terms of quantity and 46% in monetary terms respectively.
- In 2014 China holds **95%** of the total importing US market for **dried garlic**, with minimal contribution from European players such as Germany and Italy.
- **Peppers of the genus Piper** are the most highly imported, type of pepper during the period 2012 – 2014, mainly from Asian economies.
- **Trans-atlantic trade and Investment Partnership** (TTIP), which are currently under negotiation has the potential to enhance bilateral trade patterns, increase openness and create opportunities for new Greek and European players to enter the market.

Figure 42 | Imported value of HS code 0910 (2014)



Source: International Trade Center (ITC)

Chapter 3 | USA Market Analysis

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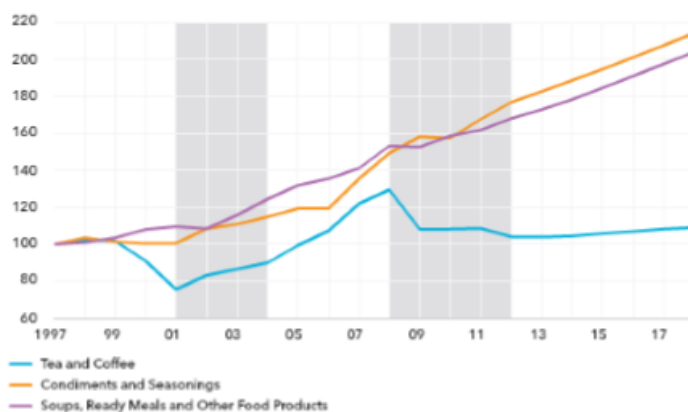
3.1. Supply & Consumption

The US domestic market is not traditionally a producing market for herbs or spices. Apart from the climate which is not in favor of production, labor shortages and agricultural infrastructure are also barriers to growth of this industry in the US.

The American spice trade association (ASTA) plays an important role in the development and representation of the spice industry in the USA. According to its principal targets ASTA helps to ensure a clean and safe spice for the public share and to advance the global industry in the interest of its members and the entire supply chain.

On an international level the US market for Spices and herbs is growing at higher rates than in the past. The graph below compares the global trend of three industry sectors; Tea and coffee, condiments and seasonings, and soups, ready meals and other food products. It indicates the condiments and seasonings sector is growing at the fastest rates.

Chart 3 Industry Sectors' Growth Indices 1997–2018



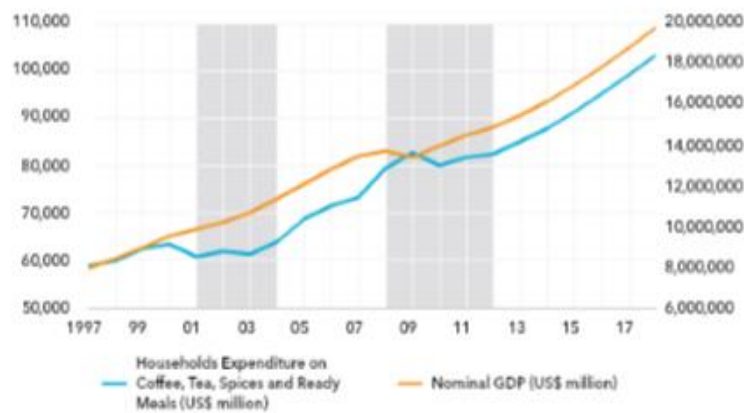
Source: Euromonitor International from official statistics, trade associations, trade press, company research.

Source: Passport Report, 2015

Even though the European and Asian consumers are the most prevalent consumers of spices, US consumers have recently developed an increasing interest in new exotic flavours and spicy tastes. According to the Passport Report, this change in US preferences has encouraged an increase in the demand for peppers and for hot sauces, the latter of which has grown by 150% since 2000 (Passport Report, Euromonitor, 2015).

An increase in immigration from Latin America (mainly Mexico) and Asia has significantly contributed to this trend. Curiosity as a result of travel and the familiarity with different cultures and their cuisines is another factor which has contributed to the US change in preferences. Access to online shopping and therefore easier access to foreign ingredients is a relative new influential factor in support of this trend. Increased obesity in the US and the need to change eating habits has played an additional role, particularly since spices and herbs have long been known for their medical and dietary benefits.

The figure below present an overview of the increased expenditures of households on the sector of Coffee, tea, spices and readymade meals, from 1997 to a forecasted value for 2017 in millions of US\$.



Source: Euromonitor International from official statistics, trade associations, trade press, company research.

Source: Passport Report, Euromonitor, 2015

In 2012 11% of the category hot drinks, spices, snacks and ready meals came from imported products, the share of imports in the domestic market was 2% higher than that compared to 2006 (Passport, 2015).

The tables below present the production capacities of the different sectors in the industry.

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Table 3 Production by Sector: Value 2007–2012

US\$ million	2007	2008	2009	2010	2011	2012
Tea and Coffee	7,522	7,979	6,671	6,670	6,692	6,417
Condiments and Seasonings	11,046	12,163	12,900	12,840	13,662	14,418
Soups, Ready Meals and Other Food Products	59,443	64,569	64,297	66,812	68,198	70,772
Total	78,011	84,711	83,868	86,322	88,552	91,606

Source: Euromonitor International from official statistics, trade associations, trade press, company research.

Table 4 Production by Sector: Annual Growth 2008–2012

%	2008	2009	2010	2011	2012
Tea and Coffee	6.1	-16.4	0.0	0.3	-4.1
Condiments and Seasonings	10.1	6.1	-0.5	6.4	5.5
Soups, Ready Meals and Other Food Products	8.6	-0.4	3.9	2.1	3.8
Total	8.6	-1.0	2.9	2.6	3.4

Source: Euromonitor International from official statistics, trade associations, trade press, company research.

Table 5 Production by Sector: Share of Total 2007–2012

%	2007	2008	2009	2010	2011	2012
Tea and Coffee	9.6	9.4	8.0	7.7	7.6	7.0
Condiments and Seasonings	14.2	14.4	15.4	14.9	15.4	15.7
Soups, Ready Meals and Other Food Products	76.2	76.2	76.7	77.4	77.0	77.3
Total	100	100	100	100	100	100

Source: Euromonitor International from official statistics, trade associations, trade press, company research.

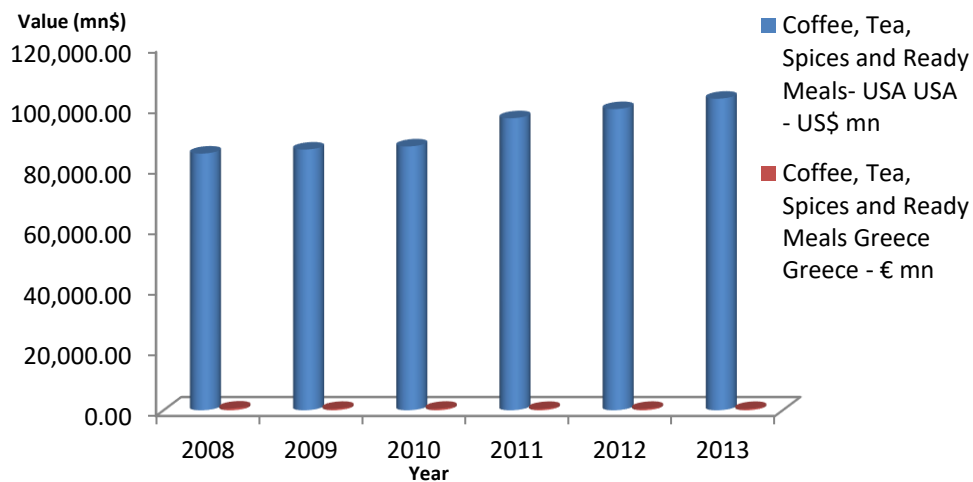
Source: Passport Report, Euromonitor, 2015

Overall, for the given period 2007 -2012 Condiments and seasonings present relatively stable and increasing market sector value. The annual growth rate of the sector followed a negative pattern in 2010, otherwise for the past years the condiments and seasonings sector has been growing at an annual growth rate of 7%.

The last table indicates the percentage of each sector as in terms of the total industry. Condiments and Seasonings only capture an average of 15% for the given period.

Comparing the production turnovers of Greece and the USA for the period 2008 – 2013 for Coffee, tea, spices and ready meals, it is evident that the US markets is significantly larger, an expected outcome because of the geographical size and population differences.

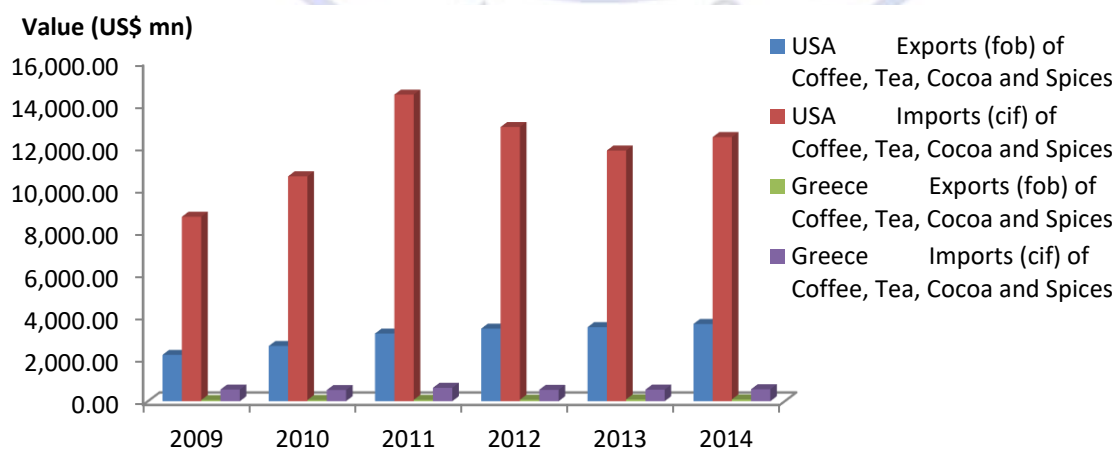
Figure 43 | Production Turnover



Source: Passport, Euromonitor, 2015

In terms of imports and exports the coffee, tea and spices sectors of the two countries are analyzed in the figure below. The US importing market is relatively much larger for the US market exporting market although there is some production and therefore some exporting activity which is growing slowly at a steady rate. The importing market peaks in 2011 and since shows an overall marginally declining trend.

Figure 44 | Imports vs Exports USA vs. Greece



Source: Passport Report, Euromonitor, 2015



Chapter 4 | Greek Market Analysis

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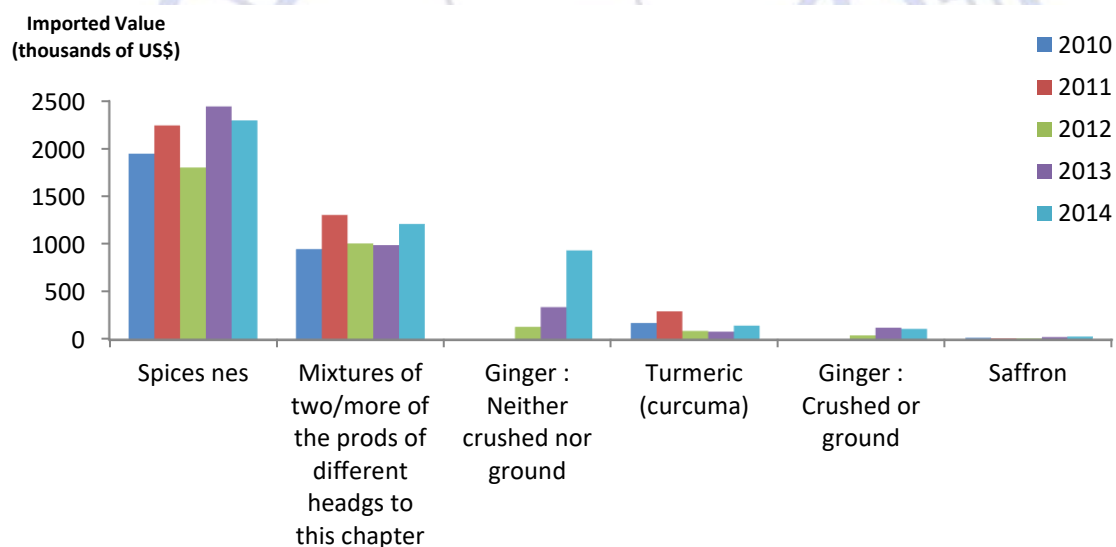
4.1. Market Overview

Greece is a net importer of both spices and herbs and is not self-sufficient since Greece traditionally does not cultivate these seasonings and domestic production cannot satisfy domestic demand.

Demand in the EU overall for spices and herbs has grown and in 2013 it was one of the biggest markets worldwide. Greece is not found amongst the leading EU markets which are the UK, Hungary, Romania and Hungary, counting for over half of the total EU consumer market. The volume of imports has grown by an average of 4.1% per year for five consecutive years. The EU imported 285,000 tons of herbs and spices from the developing world, which accounted for approximately €900 million.

The imported values of the HS code 0910 into Greece from the world are presented below, according to 2014 data presented by International Trade Center for the time period 2010 - 2014. Spices amongst which ginger and turmeric are the most highly imported from the rest of the world, since they are not domestically produced. Saffron is less imported in terms of value from third countries since it can be produced on a nationally.

Figure 45 | Imported Value from World to Greece (HS Code 0910)



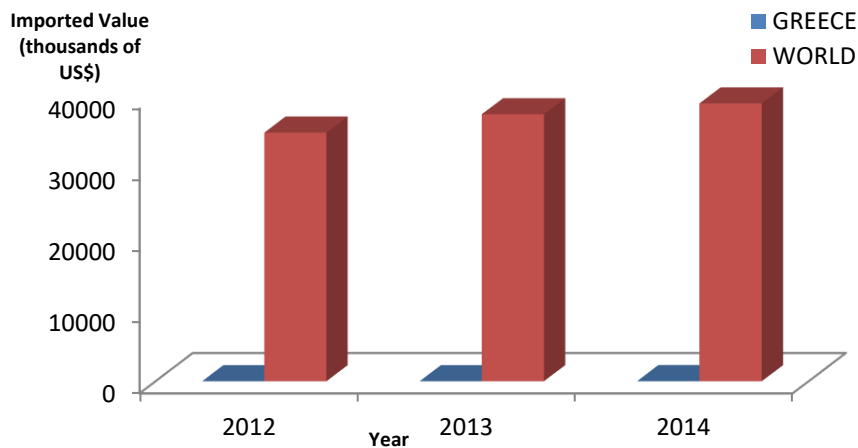
Source: US Census and UN COMTRADE

The domestic seasonings market is therefore small and limited both in terms quantity and in monetary value. The potential is therefore not particularly strong, meaning that it is not attractive for new investors.

Most spices such as cinnamon and turmeric and not imported at all from Greece to the US market. Some herbal teas and basil are imported from Greece in extremely small quantities as the figure below indicates. Its participation is insignificant as a proportion of the overall imported value from the world for the period 2012 - 2014.

4.2. BASIL

Figure 46A | USA Imports for Basil –Greece vs. World



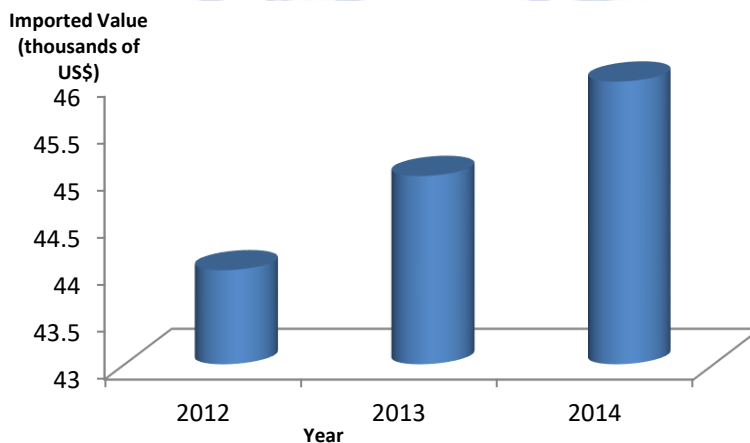
Source: US Census and UN COMTRADE

The climate allows basil to be grown in the Mediterranean climate and basil is one of the few herbs exported from Greece to the US supply market, in small quantities for consumption as figure 46A demonstrates for the period 2012 – 2014. Complex trade regulations and procedures, exist as obstacles to opening up to trade

4.3. SAFFRON

Saffron another of the few spices produced in Greece and traded to third countries. The figure below demonstrates the imported value of saffron from Greece to the USA for the period 2012 – 2014. Its value has significantly risen during this period, indicating a strong positive trend and a possible increase in demand and also an increase in the value (selling price) of saffron.

Figure 46B | Bilateral Trade between USA and Greece for Saffron



Source: US Census and UN COMTRADE

The Mediterranean climate does not favor the cultivation of the majority of spices; instead a tropical climate is more suitable. As a result, the Greek spices market does not have the potential to compete with the leading Asian competitors nor to maintain a dominant position on an international level and within the US supply market.

Chapter 5 | USA Consumer Trends

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5.1. Mega Trends

Consumption of seasonings has increased due to a number of factors some important ones are considered below:

- **Organic production and certification:** is a strongly expanding market even though it is still relatively small in size. This indicates a competitive advantage for small markets such as the EU which has the potential to specialize and export in this niche market. This market possibly presents the strongest opportunity for new entrants in the spices market internationally.
- **Authentic, new experiences:** Consumers are developing more sophisticated tastes and are increasingly willing to experiment with new flavors and products. Globalization has played an immeasurable role in the tendency of consumers to be open to new tastes and habits. Ethnic food restaurants are becoming increasingly common in the US, even though they have always been available because of the large ethnic population in the US.
- **Increased tendency to migrate and to travel:** the improvement of technological is another result of globalization on consumer consumption patterns and the global market trends. Cheaper and easier possibilities for travel for both business and leisure have allowed potential consumers to become familiar with new tastes.
- **Healthy eating and health concerns:** increased awareness and concern to tackle obesity globally and specifically in the USA, have encouraged the average US consumer to adopt new cooking habits at home.
- **Easier access to foreign products and convenience:** globalization again has played a role in increasing and improving communication lines between countries. The original spices are therefore able to be imported directly from the producing country in limited time.
Packing herbs and spices together for consumer convenience along with the relevant recipes have become a growing trend in supermarkets.

These are some of the most influential factors that have encouraged the comeback of the spices market in the USA.

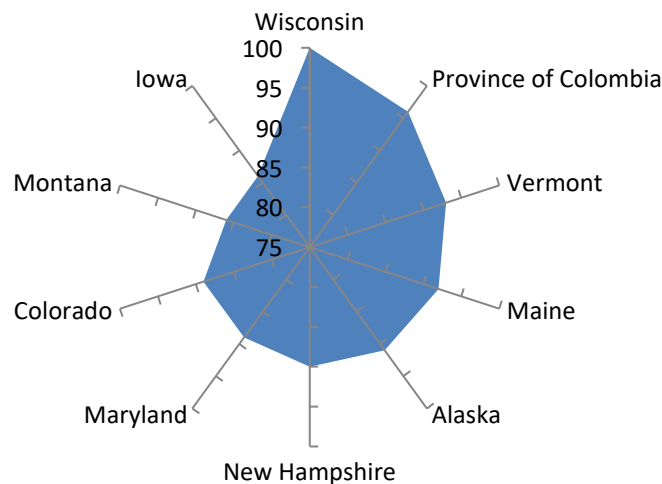
5.2. Digital Footprint

In order to study the US spices market and its consumer trends in a complete manner, it is essential to identify online consumer trends using a Google trend analysis. Google Trends calculates the number of searches that have been done by dividing the number of queries for the keyword, by the total number of Google search queries. The results of which can be grouped according to region, state, city or across time and the results are updated on a daily basis. There may be some inaccuracies which may occur (mainly including sampling issues and approximations) which have to be taken into consideration when the commentary is done. It is also important to note that the values are relative and not absolute (Reference: <http://whatis.techtarget.com/definition/Google-Trends>).

A graphical representation of the Google trends for each keyword and related phrase searched are presented and analyzed below.

The popularity of the term “spices” by state where consumers searched the term more frequently is presented. This can be a tool for potential exporters to determine which would be the best market in which they would like to invest in and locate a particular target group of consumers. Overall, the central and eastern states show an increasing interest for spices.

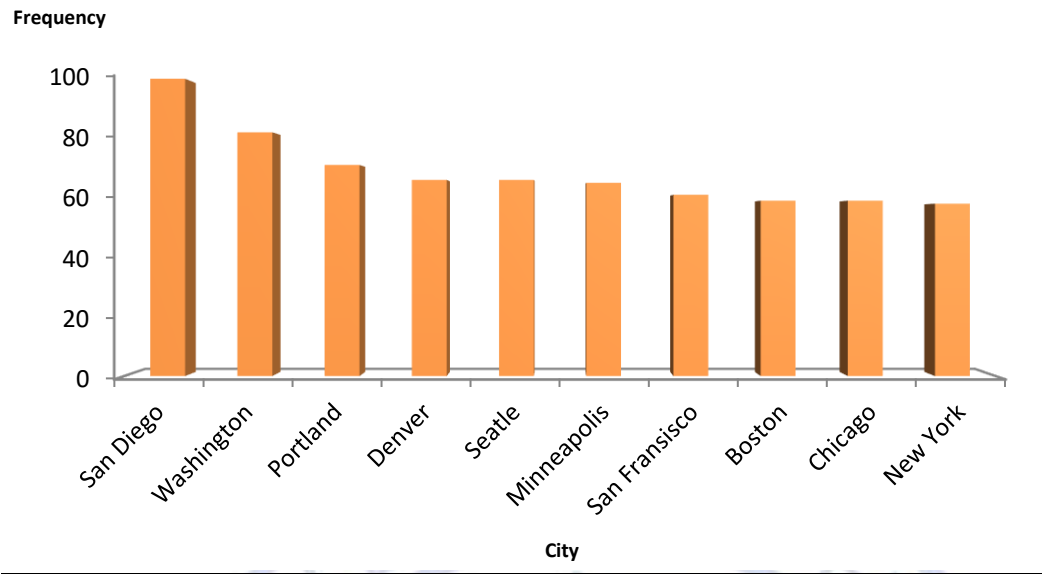
Figure 47 | “spices” by State



Source: Google Trends, 2015

When searching the same term by city, it seems that the citizens in western cities are the ones more interested in spices, which can be interpreted as a higher willingness to search and potentially to pay of consumers found in these areas. This observation comes to contrast with the previous search that indicates a favorable climate in the central and western states. This might indicate that the preferences do not in fact follow some specific trend. Nevertheless these specific markets can be a potential market worth investigating and targeting.

Figure 48 | “Spices” by City



Source: Google Trends, 2015

The term searched was varied to “spices mix”, the results are presented below. Utah is the state where the phrase was most popular amongst citizens followed by other western states which show an increased popularity in spices.

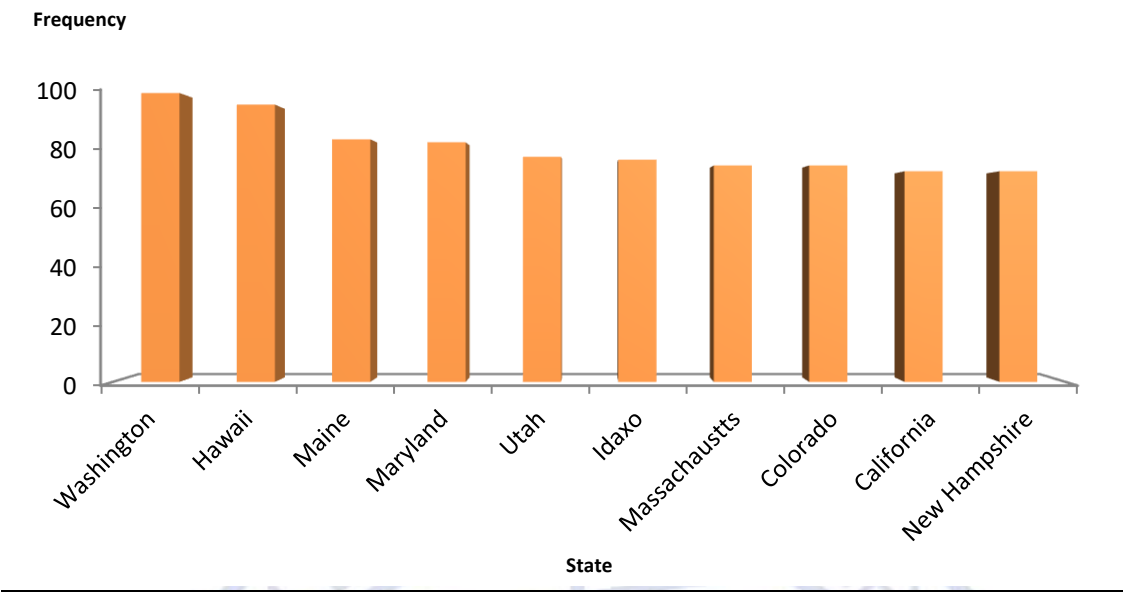
Figure 49 | “Spice” empirically 2005-2015



Source: Google Trends, 2015

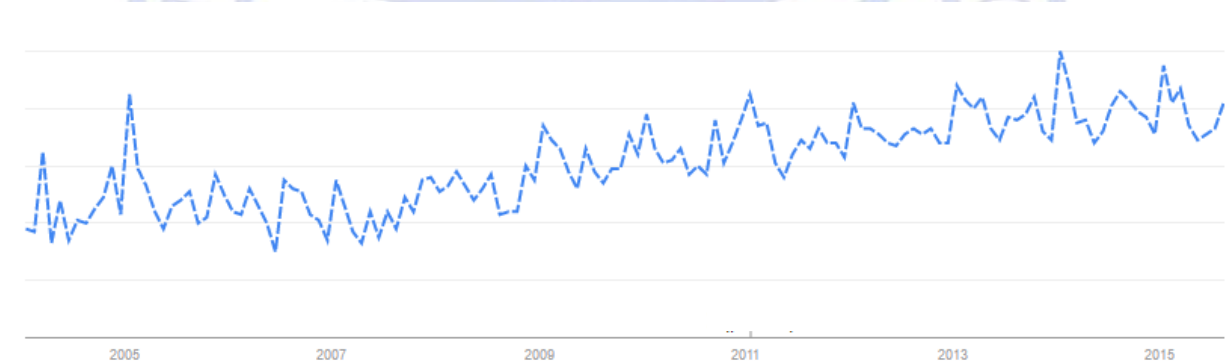
An overall upward trend is identified when searching the term spice across a time span of ten years, indicating that the market is expanding and thus potentially open to new entrants.

Figure 50 | “Curry Powder” by State



Source: Google Trends, 2015

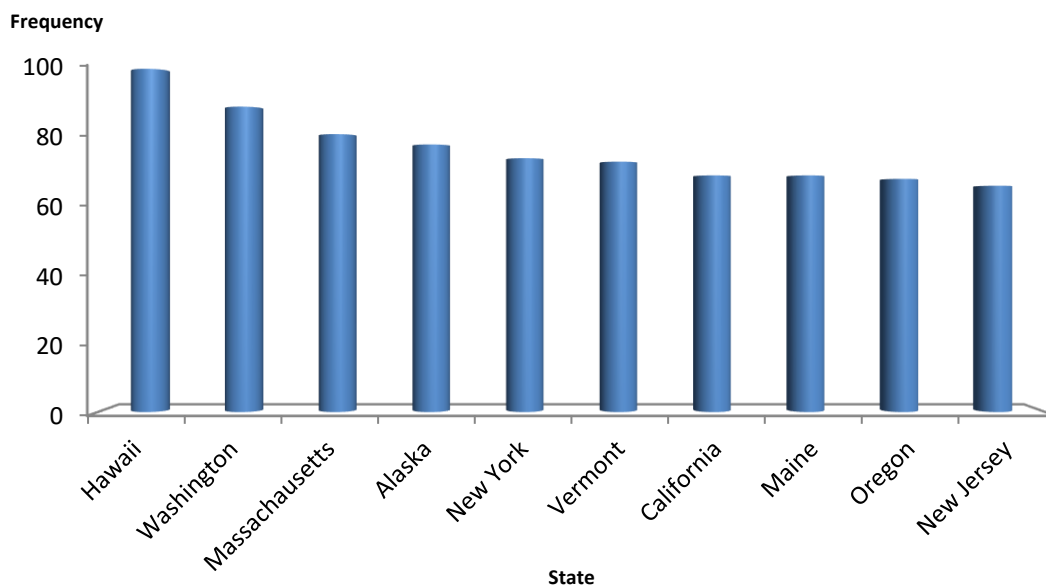
Figure 51 | “Curry Powder” empirically (2005 -2015)



Source: Google Trends, 2015

When the term searched was more specific in both the diagrams above “figures 50 and 51” the trend is increasing indicating a higher demand for getting to know about spices and the related products all over the USA. Consumers therefore seem to be more interested in becoming familiar with new spices for their knowledge and personal consumption. Additionally it is interesting to note that the cycle has continuous peaks and troughs indicating a seasonal pattern of increased interest in the winter period.

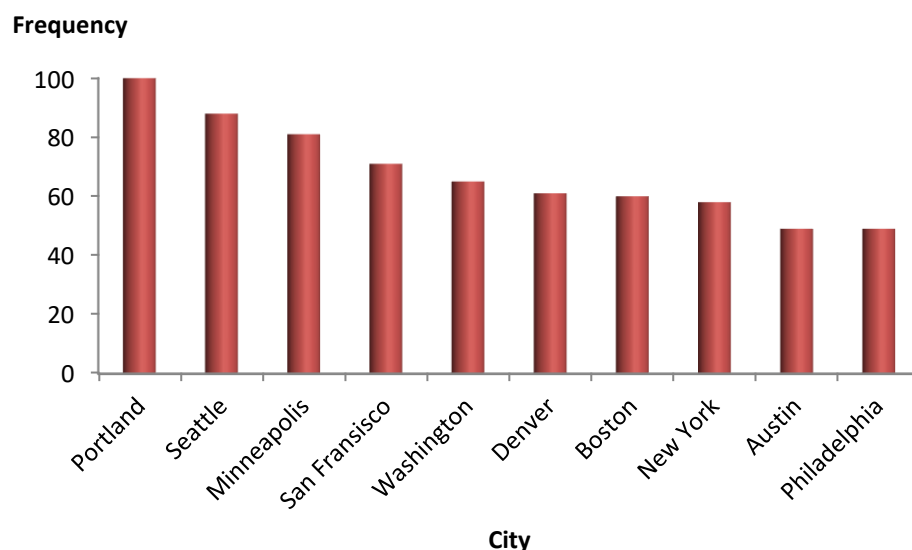
Figure 52 | “Ginger” by State



Source: Google Trends, 2015

The above graph illustrates the popularity of ginger also does not follow a steady pattern but rather follows a relatively random geographical trend. Therefore the USA market as a whole is an inviting and interesting potential market to research and invest in. Hawaii and Washington have the most searches indicating that the willingness to buy of local consumers is relatively higher than that of the rest of the US.

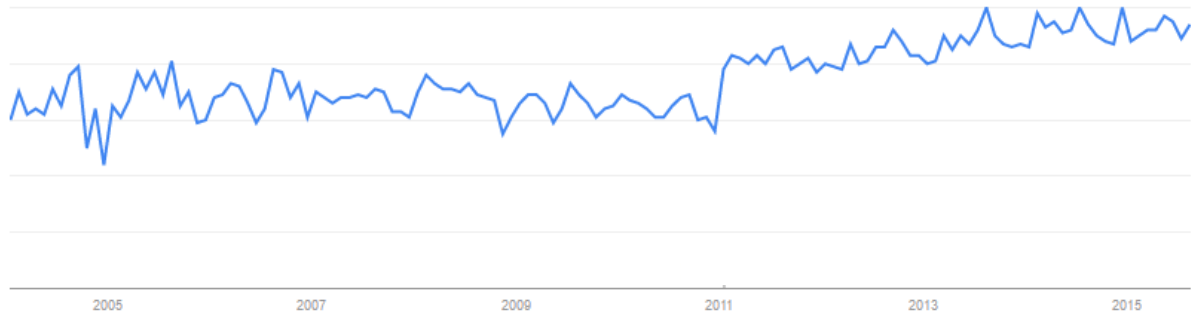
Figure 53 | “Ginger cookies” by City



Source: Google Trends, 2015

“Ginger cookies” is a related term to ginger and as it is evident from the graphical representation above; its popularity is highest in the city of Portland on the West coast of the USA, followed by Seattle, Minneapolis and San Francisco. From these results it is not evident that there is a particular trend in the interest for ginger cookies but rather a random trend again.

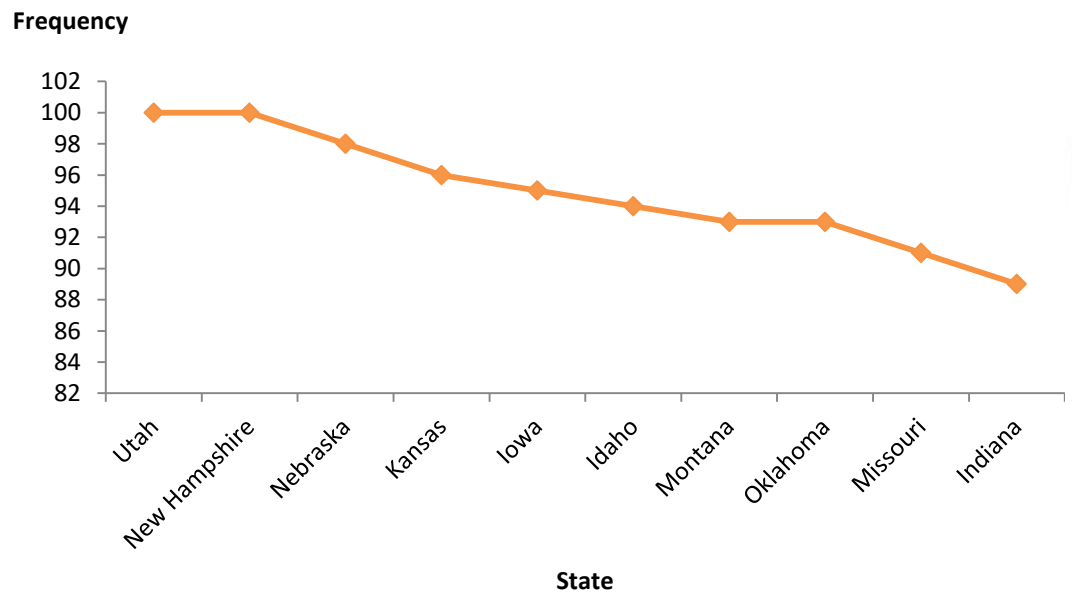
Figure 54 | “Saffron” empirically 2005-2015



Source: Google Trends, 2015

Saffron is also a relative popular term that is searched online using the Google Trends tool. Since it is probably the most expensive spice overall, it is interesting to note that from 2011 onwards consumers are become more aware of its health benefits and are therefore showing increasing interest in it.

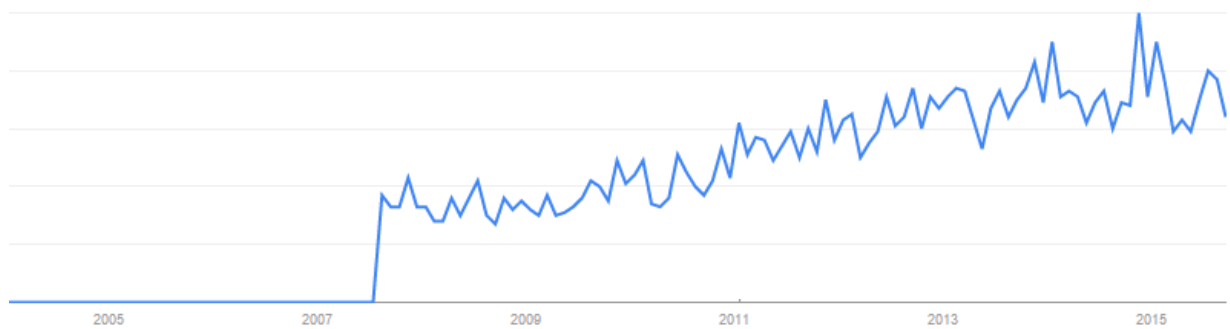
Figure 55 | “Cinnamon” by State



Source: Google Trends, 2015

It seems that Utah is the state in which the most searches were done, indicating an increased interest in this area of the USA but an overall increase in interest across the totality of the US market. The west coast however does have more intense searches for cinnamon.

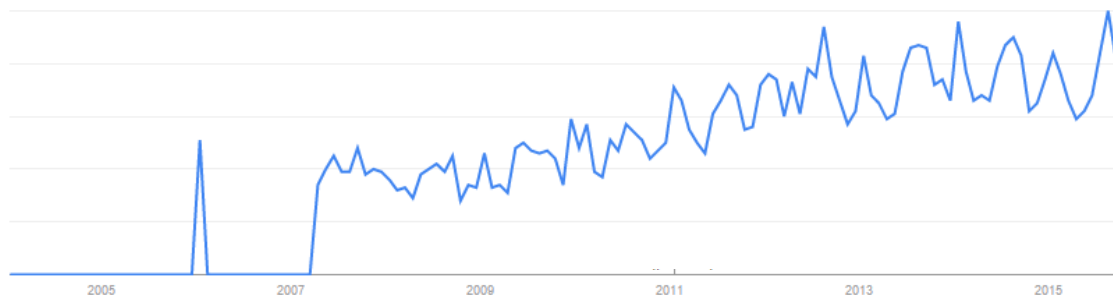
Figure 56 | “Fresh Parsley” empirically 2005 - 2015



Source: Google Trends, 2015

When searching the trend for herbs, fresh parsley presents a significant increase in the number of searches since the end of 2007 and has followed a positive linear trend, which has multiple peaks and troughs during the year. The increased awareness of the Mediterranean diet has surely contributed to the development of this pattern. A similar trend is observed for dried basil as figure 52 shows below.

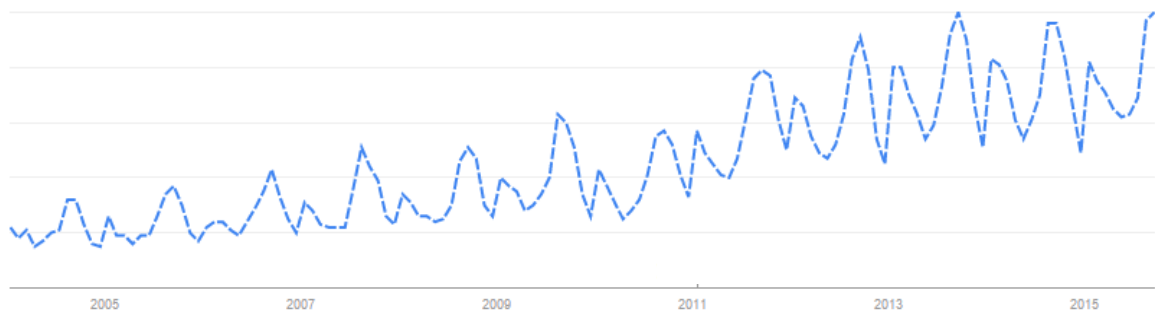
Figure 57 | “Dried basil” empirically 2005 - 2015



Source: Google Trends, 2015

The increased popularity of the Mediterranean diet as well as travelling to Europe has also induced US consumers to familiarize themselves with the Mediterranean dishes, some of which that include spices or herbs presented above popular are presented below.

Figure 58 | “Stuffed peppers (dish)” empirically 2005 - 2015



Source: Google Trends, 2015

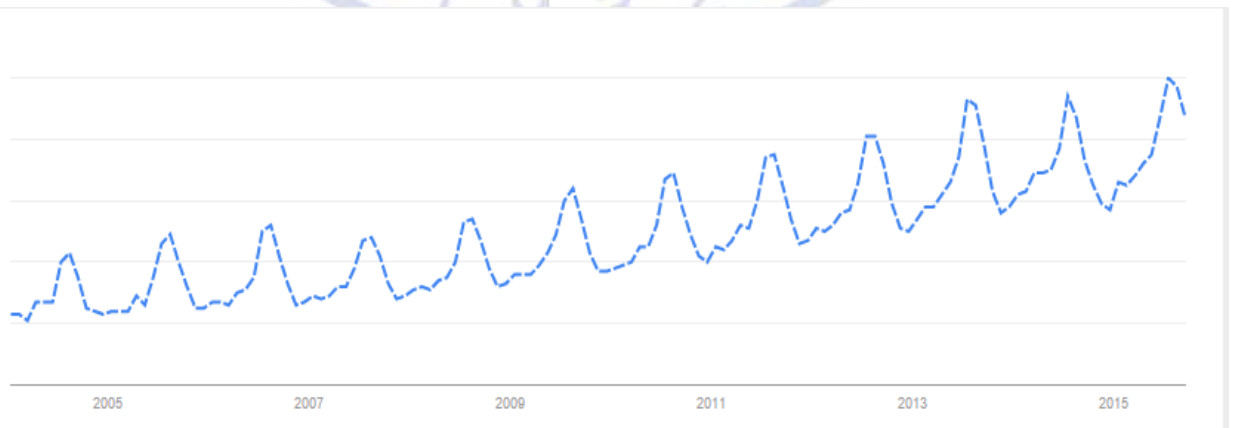
A traditional Greek dish whose main ingredient is peppers of the Capsicum type is becoming increasingly popular amongst the US consumers during the last 10 years. Consumer's searches tend to peak during the summer months, during which the dish is typically prepared. Bell peppers as a separate ingredient also present an upward trend as shown in figure 59.

Figure 59 | “Bell Peppers” empirically 2005 - 2015



Source: Google Trends, 2015

Figure 60 | “Pesto” empirically 2005 - 2015

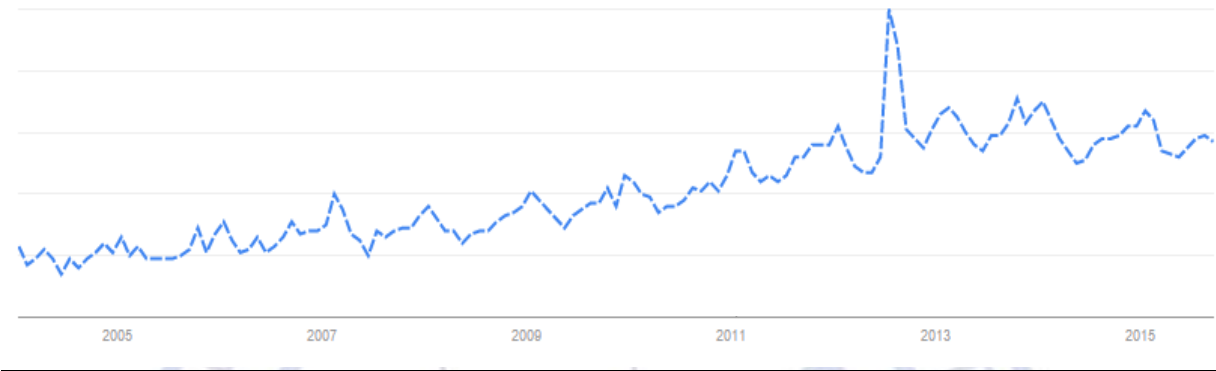


Source: Google Trends, 2015

Pesto is a very popular ingredient of the Italian cuisine, the basic ingredients being basil and olive oil. Again steadily supports the same consumer behavior.

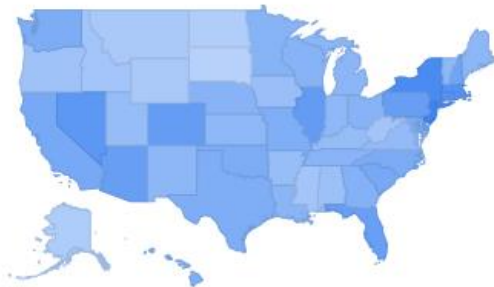
Garlic bread on the other hand does not present such a steady increase in interest amongst the US consumers overall. There is however a positive linear relationship which presents a clear peak at the end of 2012.

Figure 61 | “Garlic bread” search empirically 2005 - 2015



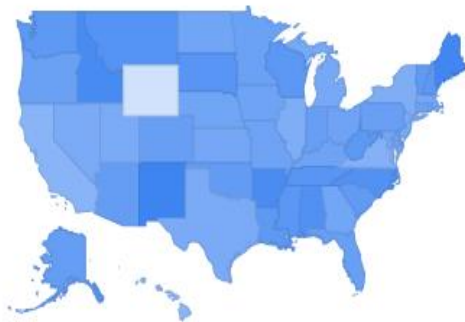
Source: Google Trends, 2015

Figure 62 | “Italian Restaurants” across the USA



Source: Google Trends, 2015

Figure 63 | “Mediterranean diet” across the USA



Source: Google Trends, 2015

Across the USA it is evident from the map of the US presented in figure 63 that there is a strong interest amongst US citizens to search for Italian restaurants across the country. This is also the case for the search of the Mediterranean diet which is extremely dense in numerous states of the US.



Chapter 6 | Export Kit

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Food Facility Registration (US FDA)

Facilities that manufacture, process, pack or hold food that is intended for human or animal consumption in the United States must register with FDA before beginning these activities. The registration requirement applies to any facility that conducts these activities, unless a facility is specifically exempted.

Requirements governing food facility registration:

- Public Health Security and Bioterrorism Preparedness and response act of 2002 (Bioterrorism Act)
- 21 CFR section 1.225
- Food Safety Modernization Act (FSMA)

Labeling (US FDA)

Food manufacturers are responsible for developing labels (including nutrition information) that meet legal food labeling requirements, first and foremost, labeling of FDA-regulated food products must be truthful and not misleading. Proper labeling, including nutrition labeling and labeling of the major food allergens, is required for most prepared foods.

Note | Among labeling requirements is a requirement that packages and containers of food products sold in US interstate commerce bear labels in English that include specific information

Requirements governing the labeling of foods

- Federal Food, Drug, and Cosmetic Act (FFD&C Act)
- Fair Packaging and Labeling Act
- Nutrition Labeling and Education Act
- FDA's regulations on Food labeling – 21 CFR 101

Prior Notice of Imported Food (US Food)

The Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (the Bioterrorism Act) directs the Food and Drug Administration (FDA), as the food regulatory agent of the Department of Health and Human Services, to take additional steps to protect the public from threatened or actual terrorist attack on the US food supply and other food-related emergencies.

Along with other provisions, the Act requires that FDA receive prior notification of food, including animal feed that is imported or offered for import into the United States. Advance notice of import shipments allows FDA, with the support of the US Customs and Border Protection (CBP), to target import inspections more effectively and help protect that nations; food supply against terrorist acts and other public health emergencies.

The FDA Food Safety Modernization Act (FSMA) signed January 4th, 2011 aims to ensure the US food supply is safe by shifting the focus of federal regulators from responding to contamination to preventing it. On May 5, 2011 the FDA published an interim final rule requiring that a person submitting prior notice of imported food, including food for animals, to report the name of the country to which the article has been refused entry. The new information can help FDA make better informed decisions in managing potential risks of imported food into the United States.

Quality Services

There are no standards or regulations which are mandated for spices and herbs, other than those that cover all foodstuffs, concerning health regulation and other similar concerns. Quality control for spices and herbs is typically managed by the processor, who will manage to supply they receive from growers in a manner that is most conducive to an end needs of their customer – be that in foodservice or retail. For example, processors in California will deduct about \$65 per ton from prices paid to growers if the product they deliver contains between seven to ten percent of fruit which has to be culled due to discoloration, being broken, severely bruised, diseased or insect infected. If the cull rate is above ten percent then the deduction rises to approximately \$130 per ton.

- ISO 22000
- HACCP
- IFS
- BRC

Kosher Procedure

As it says in the German, Man ist was man isst! Man is what man eats. The word kosher is familiar and, at the same time, foreign. One may think of strict rules and religious regulations.

In Hebrew “Kashrus”, from the root kosher (or “kasher”), means suitable and/or “pure”, thus ensuring fitness for consumption. The laws of “Kashrus” include a comprehensive legislation concerning permitted and forbidden foods. These are several aspects to these dietary rules. We will consider each aspect in turn.

All products that grow in the soil or on plants, bushes, or trees are kosher. However, all insects and animals that have many legs or very short legs are not kosher. Consequently, vegetables, fruit and other products infested with such insects must be checked and the insects examined. A vegetable prone to insect infection (e.g. cauliflower) must be carefully examined.

Certain laws apply specifically to the planting and sowing of vegetables, fruits and grains. Hybridization of different species: one may not sow two kinds of seeds on a field or in a vineyard (Lev.19:19/ Dtn. 22:19)

Forbidden fruit: fruits from trees planted within the past three years may not be eaten. (Lev. 19:23) New grain: Biblically, no new grain may be eaten, or bread baked from it, before one brings an “omer” of the first fruits of the harvest on the second day of Passover (Lev. 23:14)

The process of kosher certification has been radically affected by deep changes in the food industry and by the fact that more than 80% of the products offered by the industry contain pre-processed ingredients. Industrialization presents marvelous opportunities, but the inexorable pace of change in industrial procedures and the complexity of foodstuffs and ingredients also present significant challenges for the kosher certification process.

KIR has risen to these challenges in the course of more than fifty years' experience with food technology.

Country of Origin

In 2009, the US Department of Agriculture issued rules in relation to the country of origin status of perishable agricultural commodities, such as fresh meat and produce. However, these rules did not cover spices or herbs. As such, the only country of origin compliance that applies for exports to the USA is governed by the Tariff Act of 1930 which states that products entering the USA must be labeled with their country of origin and accordingly, in the case of spices and herbs must indicate where the spices or herbs were sourced from, and not just the country where the spices or herbs were processed or packaged. However, this information is usually provided in very small print in labels and packaging, it is quite legitimate for Spanish herbs, for example, to be shipped to Italy for packaging and then exported to the USA and sold as Italian herbs. In Canada, the rules are even less transparent. There is no need to indicate the name of the country of origin where the spices or herbs were prepared or processed as long as the name of the Canadian importer prefixed by the statement "imported by" or the foreign producer is detailed.

