

# An Overview of The Nut Industry

**Mr. Pratap Nair**  
Board Member  
Ambassador  
INC International Nut and Dried Fruit Council



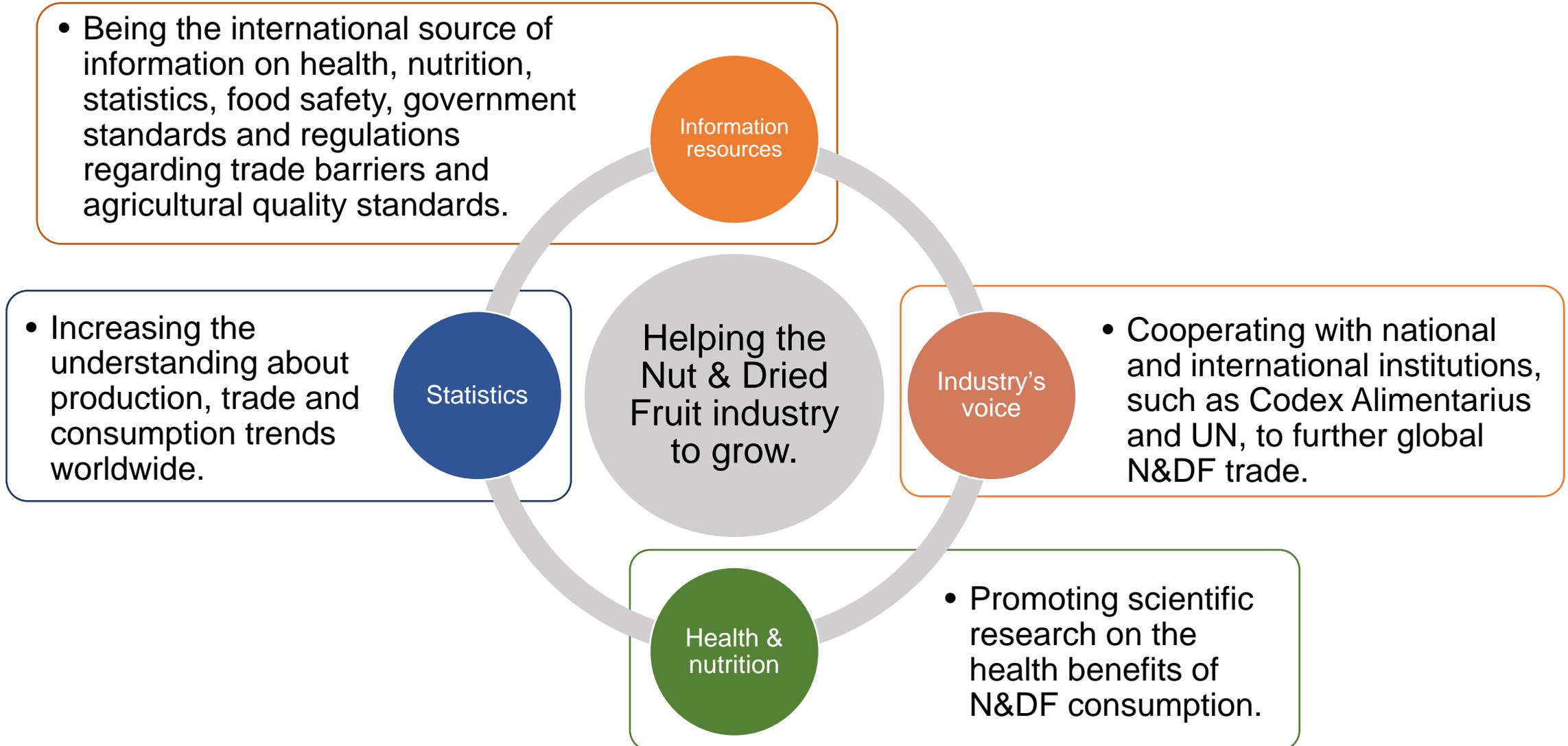
## ■ **Vision**

- To be the international source for information on Nuts and Dried Fruits for health, nutrition, statistics, food safety, government standards and regulations regarding trade barriers and agricultural quality standards.

## ■ **Mission**

- To stimulate and facilitate sustainable growth in the global Nut and Dried Fruit Industry.

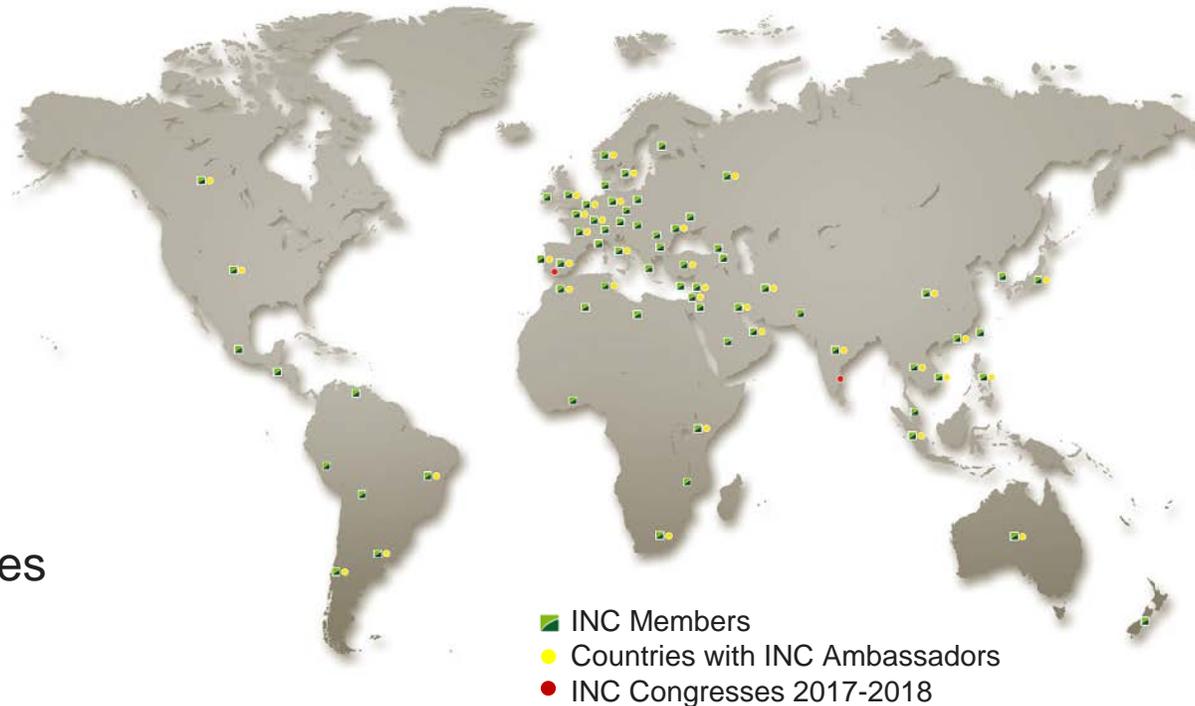
# INC aims for



## 17 Products

- Almonds
- Apricot Kernels
- Brazil Nuts
- Cashews
- Hazelnuts
- Macadamias
- Pecans
- Pine Nuts
- Pistachios
- Walnuts
- Peanuts
- Dates
- Dried Apricots
- Dried Cranberries
- Dried Figs
- Prunes
- Raisins, Sultanas & Currants

- Membership: **+750 companies from +80 countries.**
- A Board of Trustees from 12 countries.
- Ambassadors in +30 countries.
- An international team: 11 sub-committees.



## Publications

- Monthly Newsletter
- Weekly *Cracking the News*
- *Nutfruit* Magazine
- Online Database
- Statistical Yearbook
- Trade Flows World Map
- Technical Information Kits



## ■ Vision

- Achieving global growth and sustainability of the cashew nut sector.

## ■ Mission

- Promoting the global cashew nut sector by increasing awareness of the health benefits of cashews, promoting usage and consumption, and promoting food safety and quality standards.

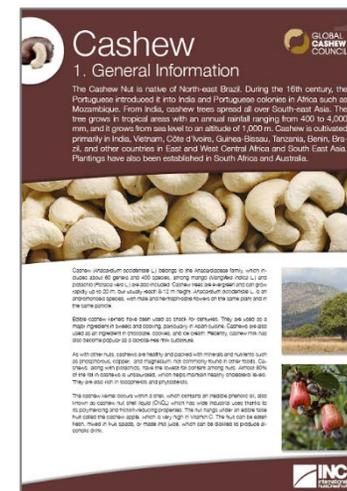
# Goals

1. To provide worldwide statistics of cashew production and consumption trends and to promote growth with a good balance between supply and demand.
2. To study and promote usage and consumption of cashews using appropriate platforms throughout the world.
3. To research the nutritional profile of cashews, to determine appropriate health platforms and possible health-claims, and to validate these benefits with scientific research including clinical trials.
4. To launch a program of activities to disseminate and publicize health messages related to cashews around the world.
5. To evaluate and suggest basic industry-standards for compliance with food safety regulations and issues internationally, and to work with regulatory bodies worldwide on food safety, social and ethical issues related to cashews.
6. To work actively on global cashew standards, with adaptations for different origins and destinations if necessary.
7. To evaluate possible synergies in the cashew value-chain and create added value to benefit producers, processors, traders, the food industry and the final consumer.
8. To liaison with international institutions such as the FAO, WTO, WHO, EU, CFC, etc. and other governmental and non-governmental bodies to gather necessary support for the above activities.

# Highlights

- GCC-funded study: Clinical trial, cardiovascular benefits of cashews, led by Dr. David J. Baer, USDA Beltsville Human Nutrition Research Center.
- GCC-funded study: Rico R, Bulló M, Salas-Salvadó J. Nutritional composition of raw fresh cashew (*Anacardium occidentale* L.) kernels from different origin. Food science & nutrition 4.2 (2016): 329-338.
- Technical Information Kit: a basic understanding of using cashews (characteristics, applications, food safety and quality standards).

- English
- Spanish
- French
- Vietnamese



**Cashew**  
1. General Information

The Cashew N4 is native of North-east Brazil. During the 16th century, the Portuguese introduced it into India and Portuguese colonies in Africa such as Mozambique. From India, cashew trees spread all over South-east Asia. The tree grows in tropical areas with an annual rainfall ranging from 400 to 4,000 mm, and it grows from sea level to an altitude of 1,000 m. Cashew is cultivated primarily in India, Vietnam, Côte d'Ivoire, Guinea-Bissau, Tanzania, Benin, Brazil, and other countries in East and West Central Africa and South East Asia. Plantings have also been established in South Africa and Australia.

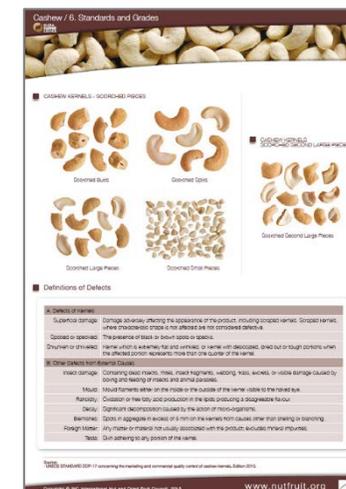
*Anacardium occidentale* L. belongs to the Anacardiaceae family, which includes about 40 genera and 400 species, among which cashew (cashew nut) and pistachio (pistachio nut) are also included. Cashew has an elongated and can grow up to 12 m. The tree usually bears 10 to 12 m high, upright branches, as an arborescent species, with male and hermaphrodite flowers on the same plant and in the same branch.

Both cashew kernels and shell are used to produce oil. They are used as a high temperature cooking and frying medium in many cuisines. Cashew is also used as an ingredient in chocolate, biscuits, and ice cream. Recently, cashew nuts have been incorporated as a preservative in many products.

As with other nuts, cashews are healthy and packed with minerals and nutrients such as protein, fiber, and potassium. They are also a good source of antioxidants, including copper, zinc, and magnesium. The antioxidants in cashews help to reduce inflammation and improve heart health. Cashews are also a good source of healthy fats, including monounsaturated and polyunsaturated fats. They are also rich in antioxidants and phytochemicals.

The cashew kernel is used in many ways, including as a snack, in salads, in soups, and in many other dishes. The cashew shell is used to produce oil and is also used in many other products.

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**Cashew / 6. Standards and Grades**

**CASHEW KERNELS - SORTED AND GRADES**

**DEFINITIONS OF DEFECTS**

**Substrate damage:** Damage to the kernel, affecting the appearance of the product, including cracked kernels, cracked shells, and kernels with a broken shell.

**Cracked or split:** The presence of cracks in both sides of the kernel.

**Crushed or broken:** Kernels that are broken into small pieces, or kernels that are broken into small pieces, or kernels that are broken into small pieces.

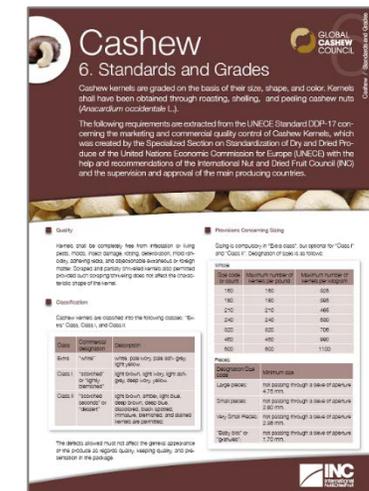
**Other defects:** Defects that are not covered by the above definitions, including kernels that are damaged by mold, insects, or other factors.

**Moisture:** Moisture content of the kernels, expressed as a percentage of the total weight.

**Foreign matter:** Any material or material not usually associated with the product, excluding mineral impurities.

**Notes:** See also the definitions of defects in the other parts of the kit.

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**Cashew**  
6. Standards and Grades

Cashew kernels are graded on the basis of their size, shape, and color. Kernels shall have been obtained through roasting, shelling, and peeling cashew nuts (*Anacardium occidentale* L.).

The following requirements are extracted from the UNEDS Standard DOP-17 concerning the marketing and commercial quality control of Cashew Kernels, which was created by the Specialized Section on Standardization of Dry and Dried Products of the United Nations Economic Commission for Europe (UNECE) with the help and recommendations of the International Nut and Dried Fruit Council (INC) and the supervision and approval of the main producing countries.

**Quantity**

Grains shall be completely free from infestation or being infested, moldy, rancid, damaged, or otherwise unfit for consumption. Grains shall be completely free from infestation or being infested, moldy, rancid, damaged, or otherwise unfit for consumption. Grains shall be completely free from infestation or being infested, moldy, rancid, damaged, or otherwise unfit for consumption.

**Classification**

Cashew kernels are classified into the following classes: "First", "Second", "Third", and "Fourth".

Class	Minimum size (mm)	Maximum size (mm)	Minimum percentage (by weight)	Maximum percentage (by weight)
First	16	18	55	55
Second	14	16	35	35
Third	12	14	10	10
Fourth	10	12	0	0

**Other classes:** "Other" (kernels that do not fit into any of the above classes), "Other" (kernels that do not fit into any of the above classes), "Other" (kernels that do not fit into any of the above classes).

**Notes:** The above requirements apply to the kernels of the product. The kernels shall be completely free from infestation or being infested, moldy, rancid, damaged, or otherwise unfit for consumption.

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## Nuts & Dried Fruits are a growing trend!

- The growing demand of N&DF is partly explained by the increase of consumers' health awareness which, at the same time, is explained by the industry efforts on communicating the health benefits of N&DF.

# Cashews



Nutrients	Cashews are high in <b>vitamin K</b> and minerals such as <b>iron, magnesium, phosphorus, zinc, manganese and copper</b> . They are also a source of <b>fiber</b> , thiamin, pantothenic acid and minerals as potassium and selenium.
Fatty acids	Cashews are relatively high in fat, but <b>most of that fat (80%) is unsaturated</b> . Saturated fat can raise blood cholesterol levels, which can increase the risk of cardiovascular disease (CVD). On the contrary, unsaturated fats, such as mono- and polyunsaturated fats, can actually decrease low-density lipoprotein (LDL or "bad" cholesterol) levels.
Vitamin K	Vitamin K contributes to normal blood clotting and to the maintenance of normal bones.
Iron	Of all nuts, cashews contain the highest amount of iron (6 mg/100 g).

- According to WHO, **cardiovascular disease (CVD) and diabetes** are leading causes of mortality worldwide, causing millions of deaths every year.
- Epidemiological and clinical studies have found that nuts may have beneficial effects on CVD risk and type 2 diabetes. However, the relation between cashews (in particular) and CVD and diabetes had been, until now, little investigated.
- In the last few years, several clinical trials led by distinguished researchers in the USA and India have examined the effect of cashew consumption on CVD risk and diabetes.
- These new studies are expected to make a landmark contribution to understanding the health benefits of cashews.

- Dr. David J. Baer and his team (USDA Beltsville Human Nutrition Center) have investigated the effect of cashew consumption on **traditional and emerging markers of cardiovascular disease risk**.
- Moreover, they measured the usable **energy content** of a serving of cashews for accurate food labeling.
- 40 participants were recruited to participate in a 9-week feeding study. Participants consumed a controlled base diet supplemented with 42 g/day of cashews during one treatment period (4 weeks), and a controlled base diet with no-cashew supplementation (control group) during another treatment period (4 weeks).
- This study was funded by the Global Cashew Council (GCC), which is coordinated by the INC International Nut & Dried Fruit Council.

Pending publication

- Dr. V. Mohan and his team (Madras Diabetes Research Foundation, India) assessed the changes in **glycemic and lipid profile among type 2 diabetic subjects** after a daily supplementation of cashews in their diets.
- In addition, they evaluated the effects of daily cashew supplementation on **blood pressure**.
- 300 participants were randomly assigned either to an intervention or a control group in a 12-week feeding study.
- This study was funded by the Cashew Export Promotion Council of India (CEPCI).

Pending publication

- The *American Journal of Clinical Nutrition* published the study “Cashew consumption reduces total and LDL cholesterol: a randomized, crossover, controlled-feeding trial” in March 2017.
- The main objective was to investigate the effect of cashew intake on serum lipids in adults with or at risk of high LDL cholesterol. 51 participants were included in the trial. They consumed a typical American diet with cashews (28-64g of cashews per day) for 28 days or potato chips in the control group.
- The results found that **daily consumption of cashews**, when substituted for a high-carbohydrate snack, in a typical American diet **may help decrease total cholesterol and LDL (“bad”) cholesterol**.
- This study was funded by The Kraft Heinz Co.

Already published!

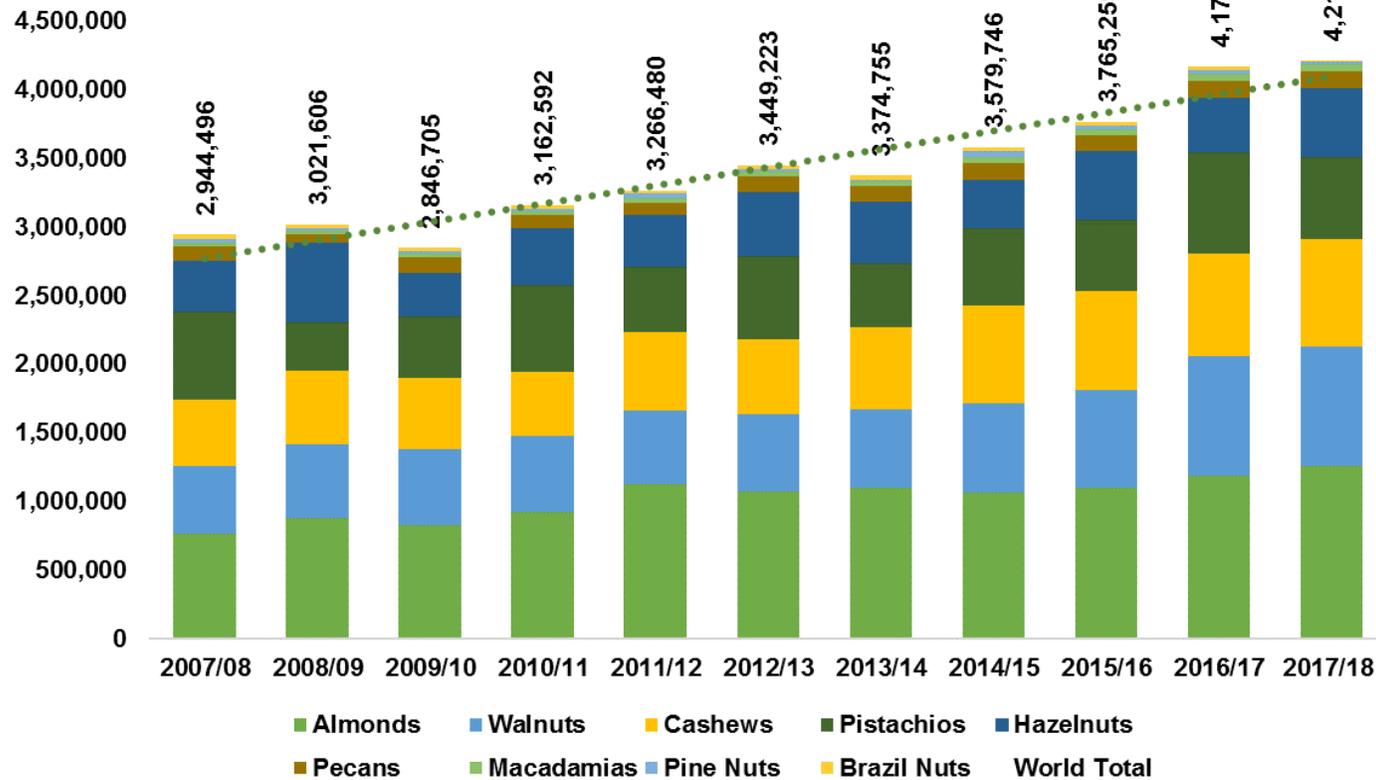


 **The American Journal of  
CLINICAL NUTRITION**

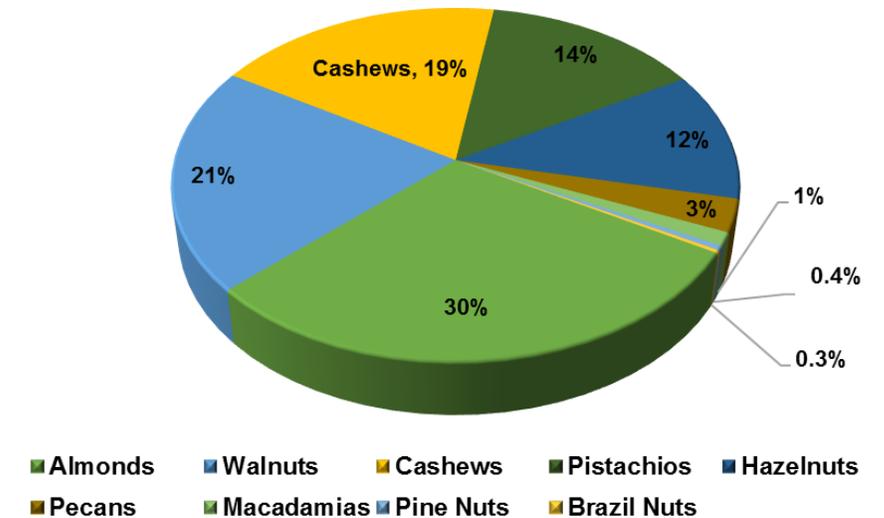
# Industry Overview

# Production

**World Tree Nut Production (Metric Tons)**  
Kernel basis, except pistachios in-shell. Source: INC



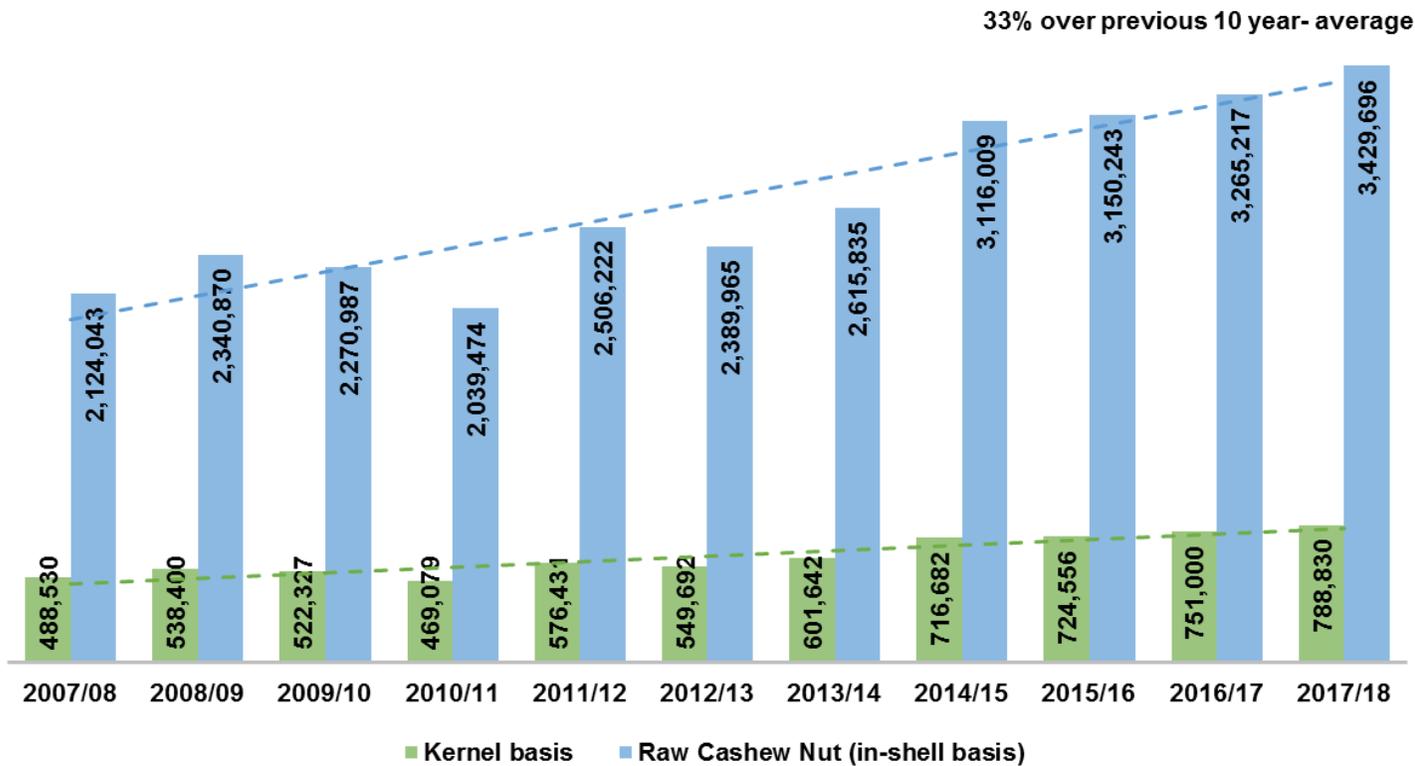
**2017/2018 World Tree Nut Production**  
Kernel basis, except pistachios in-shell. Source: INC



# Production

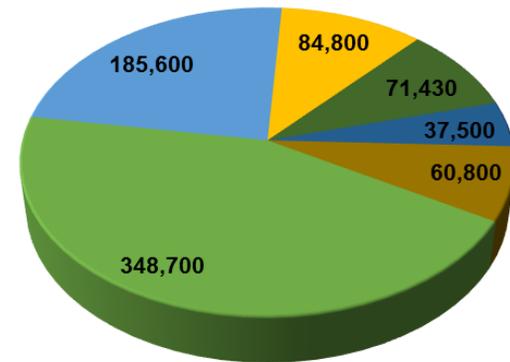
## World Cashew Production (Metric Tons)

Source: INC



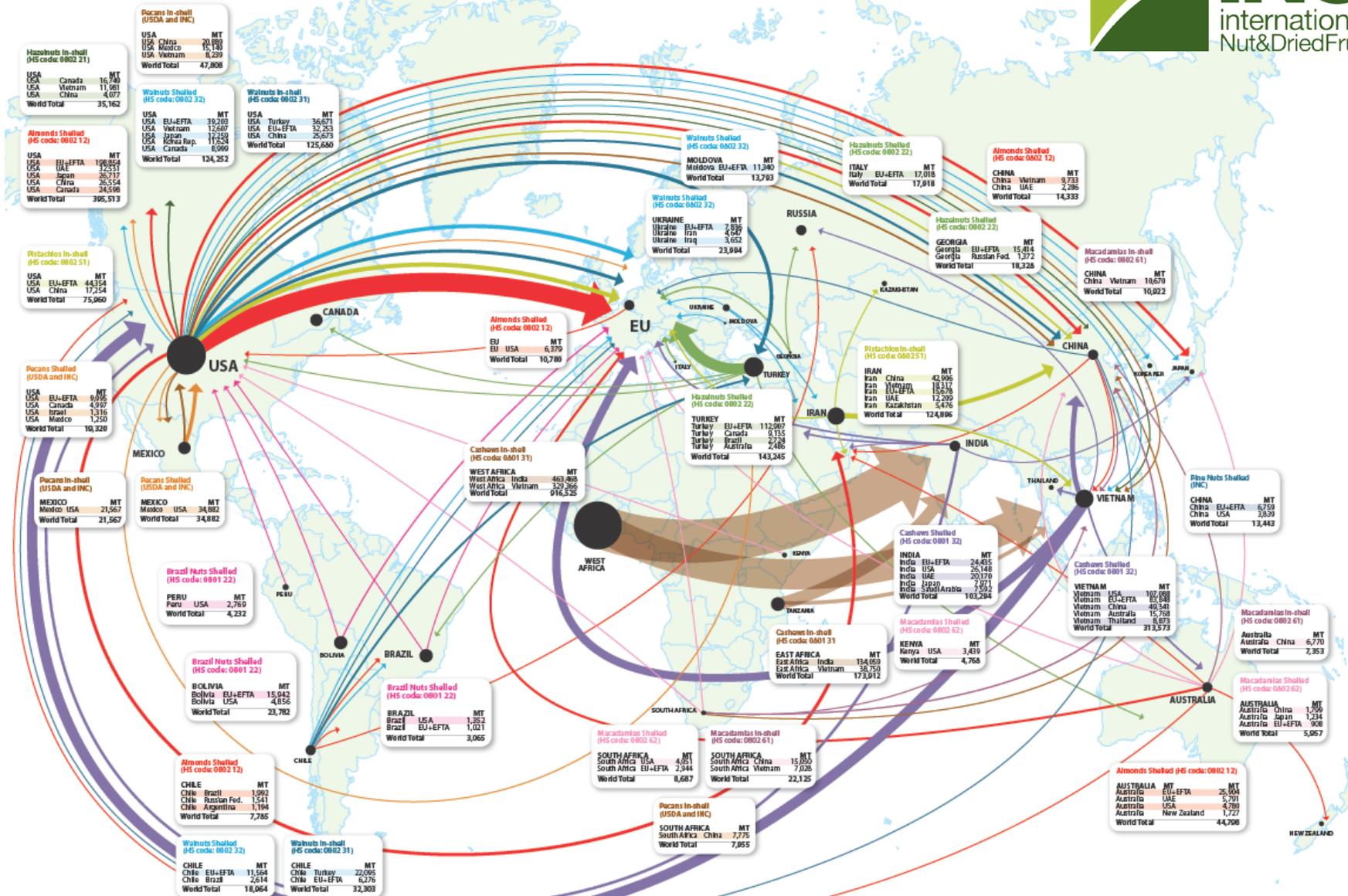
## 2017/2018 Cashew Production

Kernel basis (Metric Tons). Source: INC



- Western Africa, 44%
- India, 24%
- Eastern Africa, 11%
- Vietnam, 9%
- Brazil, 5%
- Others, 8%

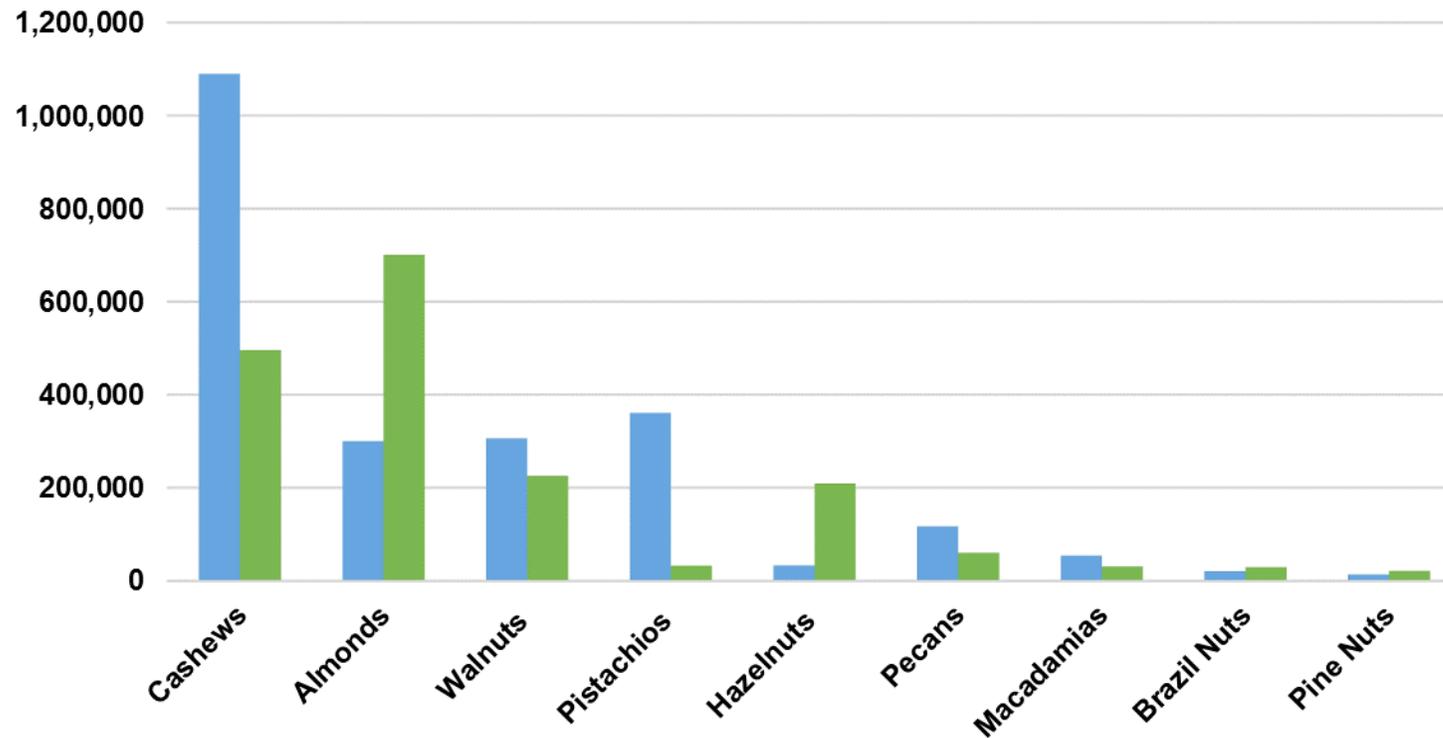
# Tree Nut Export Flows



## World Tree Nut Exports (Metric Tons)

Source: DESA/UNSD UN Comtrade Database and EC Export Helpdesk (2016)

■ In-shell ■ Shelled

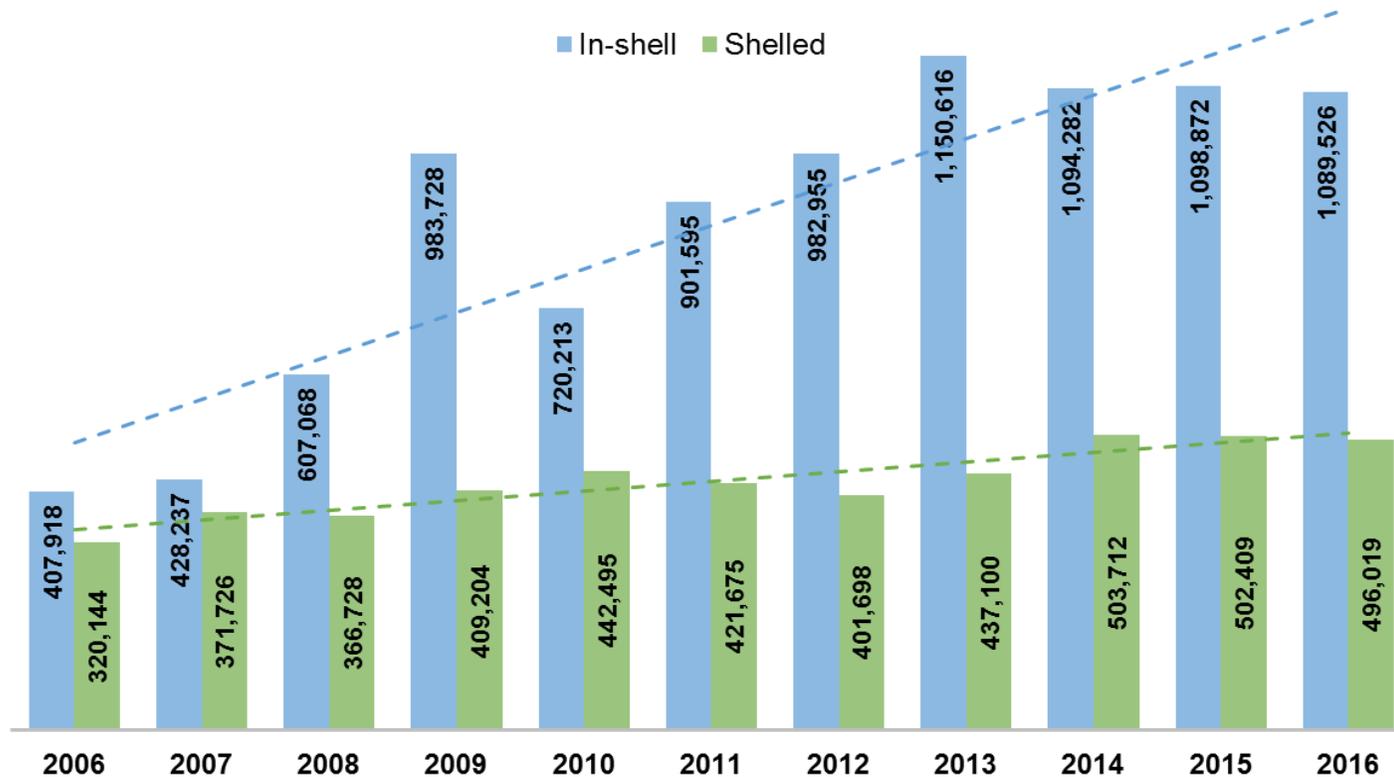


## Exports 2016 (Metric Tons)

Tree Nut	In-shell	Shelled
Cashews	1,089,526	496,019
Almonds	299,963	700,952
Walnuts	306,309	226,007
Pistachios	360,981	32,745
Hazelnuts	33,276	209,253
Pecans	117,128	60,563
Macadamias	54,509	31,187
Brazil Nuts	20,762	29,477
Pine Nuts	13,791	21,580
<b>Total</b>	<b>2,296,246</b>	<b>1,807,783</b>

## World Cashew Exports (Metric Tons)

Source: DESA/UNSD UN Comtrade Database and EC Export Helpdesk (2016)

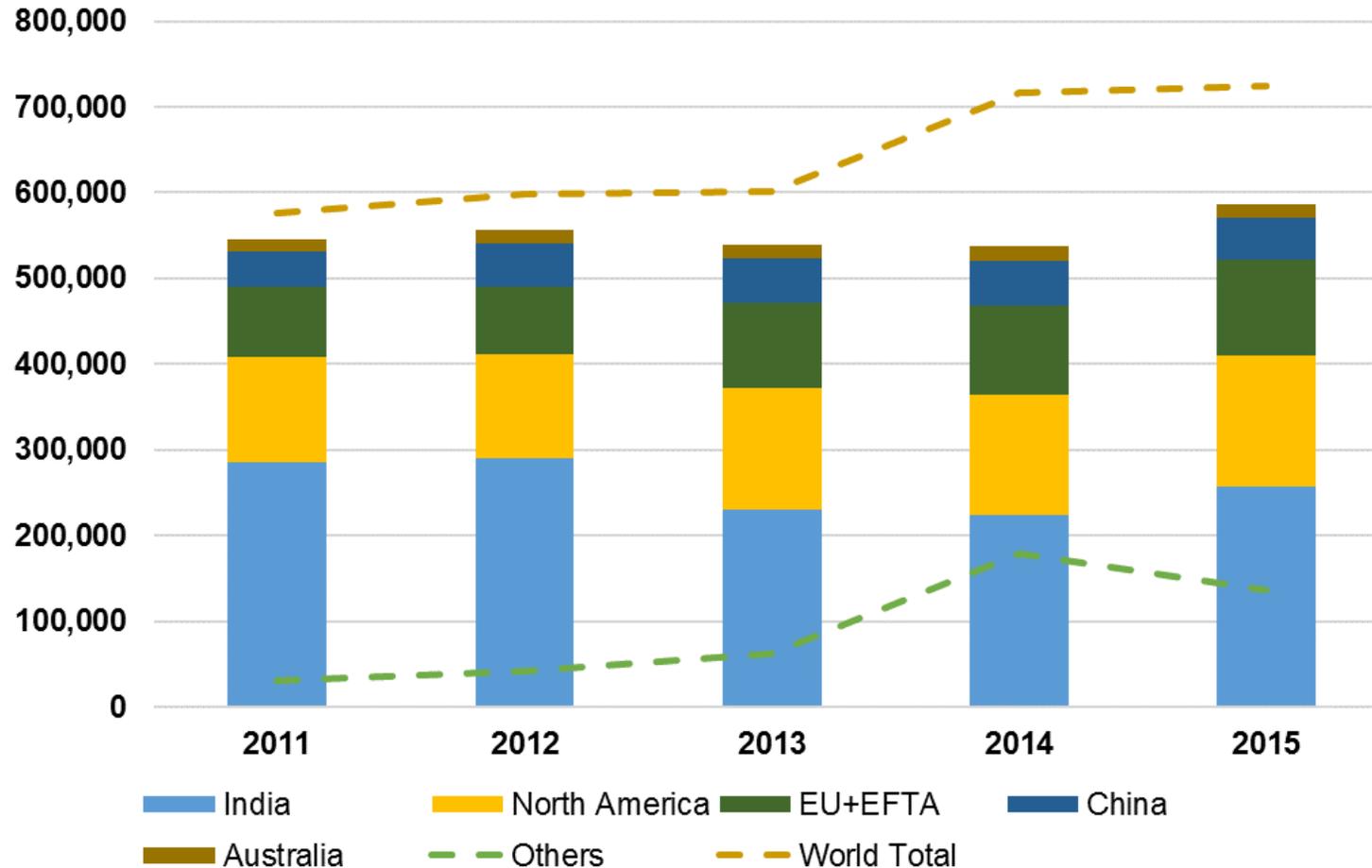


Cashews In-shell (HS code: 0801 31)		
Origin	Destination	Exports (MT)
West Africa	India	485,975
	Viet Nam	171,928
	<b>World Total</b>	<b>776,582</b>
East Africa	India	155,305
	Viet Nam	83,647
	<b>World Total</b>	<b>239,473</b>
Cashews Shelled (HS code: 0801 32)		
Origin	Destination	Exports (MT)
Viet Nam	USA	111,189
	EU+EFTA	91,825
	Australia	15,675
	Canada	9,690
	Thailand	7,457
	<b>World Total</b>	<b>276,368</b>
India	United Arab Emirates	20,168
	EU+EFTA	19,308
	USA	15,812
	Saudi Arabia	7,819
	Japan	6,113
	<b>World Total</b>	<b>85,097</b>

# Consumption

### Estimated World Cashew Consumption (Metric Tons)

Kernel basis. Source: INC



# World Nut and Dried Fruit Congress

Since **1980**

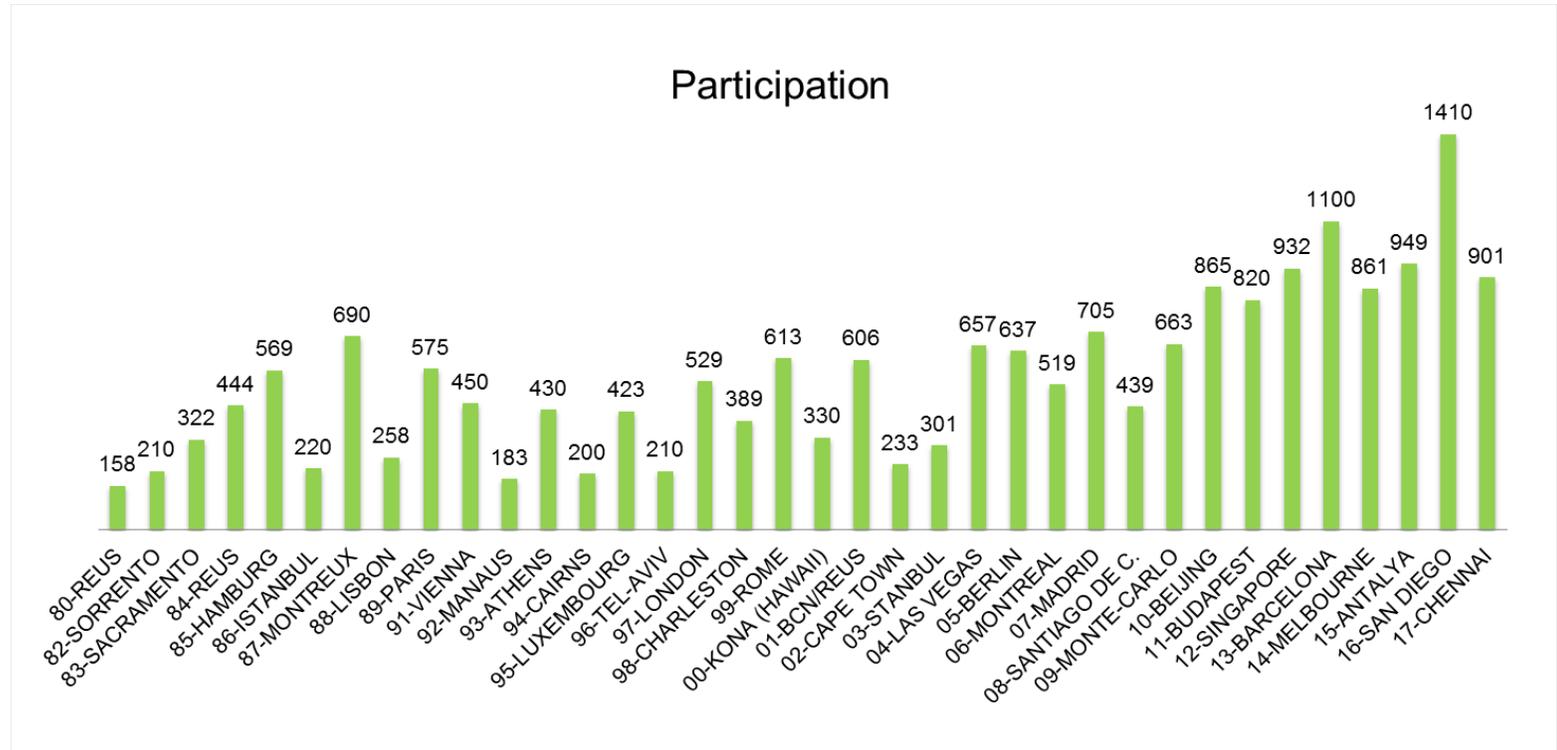
**100**'s of companies

Avg of **1000** participants

**60** countries

**20** round tables, seminars  
and keynote presentations

**60** speakers



*The world's greatest N&DF event.*

- A unique platform for participants to learn, network, and share knowledge and ideas.
- Industry's top leaders and experts.

NEXT INC  
CONGRESS



# Sevilla

**INC XXXVII WORLD NUT  
AND DRIED FRUIT CONGRESS**

MAY 21-23, 2018, SPAIN



We look forward to seeing you!

# Thank you for your attention

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