Almonds

McCauley Ray & Shang Gao



What is an Almond?

- Actually are not technically "nuts", but the seed of a fruit from an almond tree (a stone fruit similar to peaches)
 - It a drupe: a fruit with an outer fleshy part surrounding a shell that contains a seed
- May be purchased shelled, unshelled (unprocessed or blanched), slices, flakes, slivers, meal, milk, butter, etc.
- Leading US export commodity in the "tree-nut" industry
- Known for health benefits:
 - Loaded with antioxidants
 - High in Vitamin E
 - Low in carbohydrates, high in healthy fats, protein and fiber
 - Some studies have shown almonds effectively lower LDL

Almond Products







Components

Did you know?

Each almond tree fruit has 3 parts, all of which are used.

The Shell

Shells go to various alternative farming uses such as livestock bedding.

The Kernel

Kernels are the nutrient-rich almonds we eat. Every ounce of almonds—28g or about a handful—contains 6g of energy-packed protein, 4g of hunger-fighting fiber, 13g of "good" unsaturated fat and only 1g of saturated fat.

The Hull

The hull is the dry and fuzzy outer layer. Hulls are sold as livestock feed, which reduces the amount of water used to grow other feed crops.

Almond Life Cycle

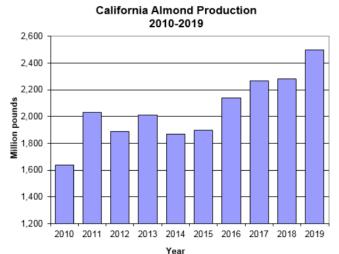
Bloom

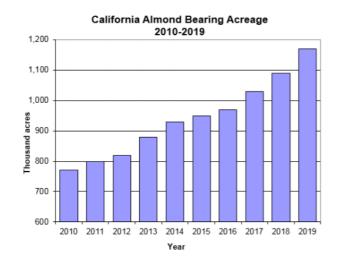
- February-March
- Pollination
 - Large bee populations are brought to orchard for pollination
- Growth
 - March-June
- Cracking
 - July-August
- Harvest
 - Mid-August-October
- Shelling
- Storage



U.S. Almond Production

- California
 - Produces 99% (of US) and exports about 70% overseas
 - Only state that produces almonds commercially
 - Expanding industry
 - Approximately 6,800 growers and 100 processors/handlers in 2017

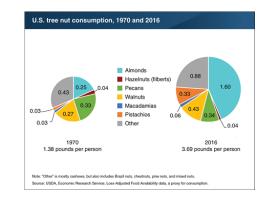


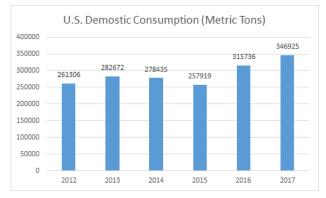




U.S. Almond Consumption

- Average Consumption:
 - Increased 1.35 pounds per person from 1970 to 2016
 - More people know its nutritional value
 - Increased demand of nuts milk
- Total Consumption:
 - Small drop in 2014 (-1%) and 2015 (-7%)
 - Due to production decline
 - Increased 22% in 2016 and 10% in 2017

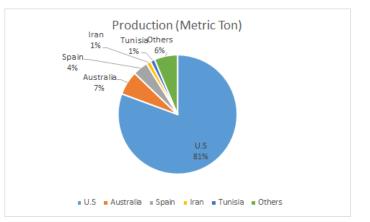




World Largest Producers (2017/2018)

- United States is the major producer of almonds.
 - 81% of world production.
 - Over 1 million metric tons (2.2 billion Pounds)

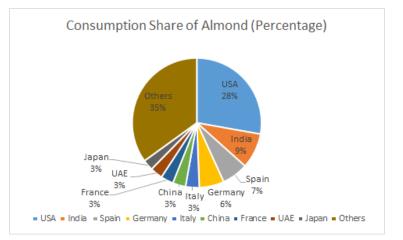
Country	Production (Metric Ton)	
United States	1000171	
Australia	80800	
Spain	50954	
Iran	15000	
Tunisia	15000	
Others	78500	



World Largest Consumers (2017)

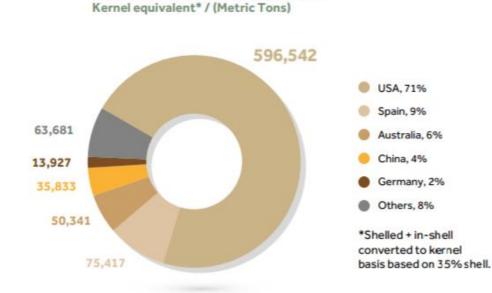
- United States is the largest consumer of almonds.
- More popular in Western Countries.
- Average consumption of Spain = 59* Average consumption of China

Country	Consumption (Metric Ton)	Average (kg)
USA	346925	1.07
India	110245	0.08
Spain	81954	1.77
Germany	77521	0.94
Italy	42765	0.72
China	40630	0.03
France	39393	0.61
UAE	39007	4.14
Japan	33573	0.26
Others	436434	



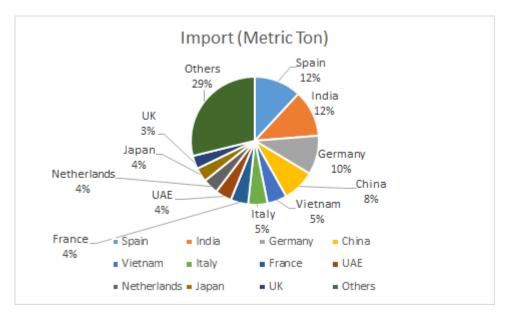
Top Almond Exporters (2013-2017 Average)

5-YEAR AVERAGE ALMOND EXPORTS



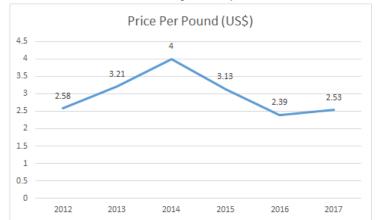
Top Almond Importers (2017)

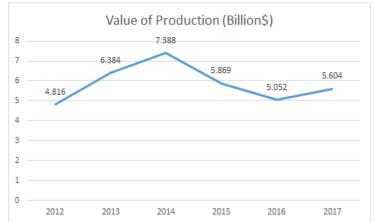
Country	Import (Metric Ton)
Spain	111288
India	110662
Germany	92237
China	76916
Vietnam	46383
Italy	45751
France	41764
UAE	39007
Japan	33573
UK	31355
Others	269292



Current Market and Pricing

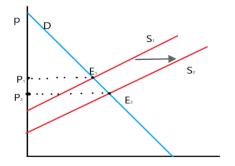
- Almonds price
- Almonds market
- Market is expected to grow as a CAGR of about 4.9% during the next 5 years, will reach \$8,180 million in 2024 (from \$6,140 million in 2019)
 - CAGR: Compound Annual Growth Rate- rate of return that tells you what an investment yield on an annually compounded basis





Current Events in Almond Industry

- COVID-19:
 - https://www.rpacalmonds.com/marketnews/202003/
 - Difficulty transporting shipping containers back and forth internationally (stuck in China)
 - <u>https://www.marketwatch.com/story/coronavirus-could-make-your-almond-milk-cheaper-in-the-us-2020-02-27</u>
 - Damaging impact of China, a large almond importer, having their ports closed
 - Already dropped from \$2.87 per lb to \$2.52 since February 7th
 - Suggests lower prices in US



Current Events in Almond Industry

- Water Usage:
 - <u>https://www.sacbee.com/news/local/environment/article231906623.html</u>
 - Almond growers taking a lot of blame for worsening California's water shortage
 - Each kernel does require 2 litres of water
 - Almond Board of California: will reduce 20% average water usage by 2025





- https://www.worldatlas.com/articles/top-almond-consuming-countries.html
- https://www.worldatlas.com/articles/top-almond-producing-countries.html
- <u>https://www.agmrc.org/commodities-products/nuts/almonds</u>
- http://www.seecalifornia.com/farms/almonds.html
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<u>https://www.nutfruit.org/files/tech/1553521370_INC_Statistical_Yearbook_2018.pdf</u>