



CRUNCH ON THIS



Harness the Power of California Almonds in Chocolate Products

[A White Paper for Food Industry Professionals and Manufacturers](#)



Few ingredients have proven themselves to be as timeless as chocolate. Global chocolate confectionery retail sales increased 32 percent from 2009 to 2014 (from \$84 billion to \$111 billion respectively), and sales are expected to reach \$125 billion by 2019.¹ In addition, confectionery is the number two category for new product introductions globally.²

To highlight the many opportunities for chocolate product development with almonds, this paper will provide a summary of two key research reports:

1. Global Chocolate Study, the Sterling-Rice Group
 - a. This online quantitative study was conducted in July-August 2014 among 5,400 consumers in ten markets: U.S., UK, France, Germany, Russia, China, India, Japan, South Korea and South Brazil
2. Chocolate Report, Innova Market Insights
 - a. Data in this report was obtained from Innova Market Insights Food & Beverage Database (Innova) and includes global new product introductions from the 2009-2013 period, including private label data

85% OF CONSUMERS

THAT CHOSE ALMONDS IN THEIR IDEAL CHOCOLATE BAR STATED THAT IT WOULD BE WORTH PAYING MORE FOR³

Consumers across the globe selected almonds as:³

- **The best nut for:** taste, nutrition, crunch, and satiety
 - Being a better choice
 - The nut respondents are more likely to buy
-

Tapping into Consumers' Chocolate Preferences

Consumers eat chocolate approximately ten times per month, which adds to the challenges manufacturers face in making their products stand out.³ **What can help manufacturers and developers differentiate their products and tap into consumers' flavor and texture preferences?** The solution is California almonds, a versatile, crunchy and flavorful way to improve chocolate formulations and increase their appeal.

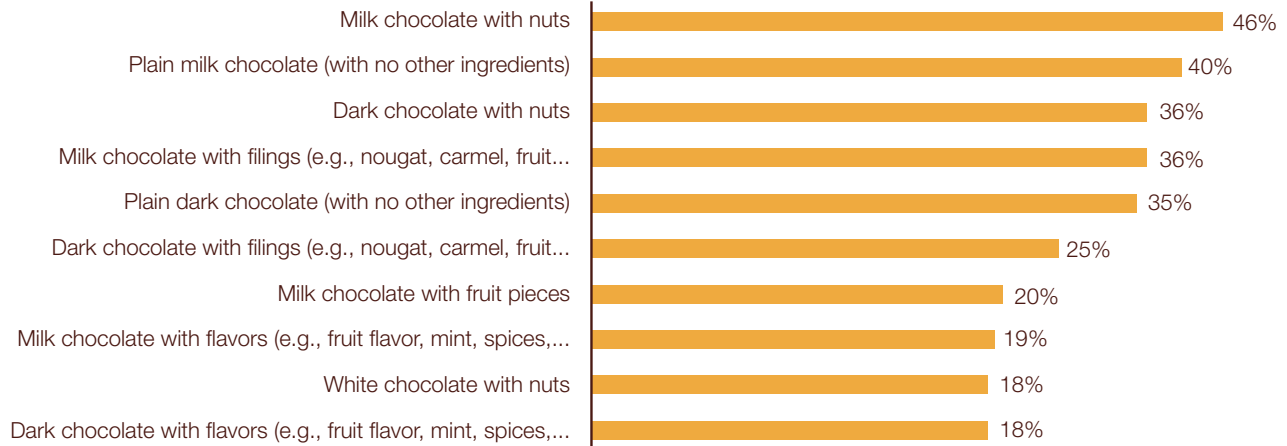
About three-quarters (72 percent) of consumers feel it's important for chocolate to be exciting, and almonds' one-of-a-kind, craveable crunch can help manufacturers deliver on this demand.³ 70 percent of consumers prefer nuts in chocolate, and believe almonds with chocolate make a product more:³

- **Tasty**
- **Crunchy**
- **Nutritious**
- **Filling**

Almonds currently account for 54 percent of all chocolate with nut occasions, and a significant 31 percent of total chocolate occasions.³ **This means that almonds are a smart choice for manufacturers tasked with appealing to different groups of consumers.** Though the majority of consumers prefer to stick to their favorites when selecting chocolate products (77 percent), almonds' versatility allows for fresh and unique combinations that will appeal to the 70 percent who feel it is "fun to try new and interesting flavor combinations when eating chocolate."³



TYPES OF CHOCOLATE EATEN: 2014³ (Total Sample, n=5,4000)



Taste, Texture and Versatility

The versatility of the California almond extends far beyond its many forms – research shows that almonds’ taste and texture rank at the top of the charts in consumer appeal.³

For consumers, taste ranks as the most important attribute when choosing a chocolate product.³ And, consumers around the world rated almonds as the number one nut that delivers on taste.³ In fact, 77 percent of consumers believe products with chocolate and almonds are “tastier.”³ With each of their unique forms, almonds provide a variety of sweet fruit and soft vanilla aromas that pair perfectly with chocolate, in sweet or savory formulations.

“I find the flavor of California almonds to be incredibly versatile and useful for my chocolate formulation needs, whether I’m working with acidic ingredients like aged balsamic vinegar, sweet fillings like raspberry puree, or spices and chilies. Almonds balance the flavors and are a natural complement to chocolate.” – Richard Cusick, Evolution Artisan Confections

Along with endless flavor possibilities, almonds’ distinctive crunch provides an intriguing contrast to the creamy texture of chocolate. Roasting whole, diced, halved, chopped or slivered almonds before incorporating them into a formulation will lock in their texture and maintain their crispy and crunchy appeal through the finished product, according to research chef John Csukor of KOR Food Innovation. Innova Market Insights’ data confirms the top texture claims in new product introductions:⁴

- Smooth
- Creamy
- Crunchy
- Crispy

Almonds not only bring crisp and crunch to chocolate products; with certain forms, they can add unexpected rich creaminess. Almond butter and paste are useful for achieving a smooth texture in fillings, coatings and more. Their light nutty flavor compliments other top consumer picks for ingredients like raisins, coconut, strawberry, cherries and raspberries.³ From classic mendiants and chocolate covered almonds, to nougat bits and clusters, there’s an almond form to meet every formulation challenge.

California almonds are available in 15 forms, including those frequently used with chocolate:



ALMONDS ARE THE NUT SELECTED AS THE BEST FIT WITH BOTH MILK AND DARK CHOCOLATE³

Health Halo

Today's discerning consumers are not only looking for great taste and compelling texture, they also expect their chocolate products to meet their needs for more nutritious, satisfying choices. According to research into how consumers felt about their most recently consumed chocolate product, there is opportunity for manufacturers to better deliver on consumer demands for nutrition and health benefits.³

“Chocolate’s common association with indulgence can be shifted to achieve a nutritious halo, with the help of ingredients that are considered more health-forward,” said Lu Ann Williams, Head of Innovation, Innova Market Research. “This includes products which are free from what people consider unhealthy in chocolate: sugar, artificial additives or preservatives and too many processed ingredients.”

Around the world, consumers indicate they are purchasing chocolate with nuts as a health-minded alternative more often than other options such as chocolate with fruit, smaller portion sizes, and resealable packages.³



GLOBAL CHOCOLATE NEW PRODUCT CLAIMS: 2014²

Key claims	Number of Products in 2014	Share of Global Chocolate Introductions in 2014
Allergy (* Includes the claims allergy, gluten-free and lactose-free)	1224	8.8%
Organic	929	6.7%
No Additives/Preservatives	822	5.9%
Natural	367	2.6%
No Added Sugar	317	2.3%
No Trans Fats	279	2.0%
Sugar Free	162	1.2%
High/Source Of Fiber	109	0.8%
Antioxidant	90	0.6%
Low calorie	63	0.5%

Almonds have a wealth of nutritional benefits that can strengthen the delivery of satisfaction from chocolate products. One ounce of almonds provides **4 grams of filling fiber**, “good” monounsaturated fat and **6 grams of energy-rich protein***. Almonds also offer 13 essential nutrients* and are one of the top food sources of the antioxidant alpha-tocopherol vitamin E.

Consumers also give credit to the health attributes of almonds and what they bring to chocolate. In a survey that asked respondents to build their ideal chocolate bar, 88 percent of those who included almonds described the bar as nutritious.³ Perhaps this is why **respondents selected almonds as the number one nut in their ideal chocolate bar formulation.**³ Milk chocolate, caramel, raisins and wafers were the other top ingredient picks by consumers building their ideal custom chocolate bar.³

Almond Nutrition Facts

Serving Size 1 ounce (28g) or about 23 almonds	
Amount Per Serving	
Calories 160 Calories from Fat 120	
% Daily Value*	
Total Fat 14g	22%
Saturated Fat 1g	5%
Polyunsaturated Fat 3.5g	
Monounsaturated Fat 9g	
Cholesterol 0mg	0%
Sodium 0mg	0%
Potassium 200mg	6%
Total Carbohydrate 6g	2%
Dietary Fiber 3g	12%
Sugars 1g	
Protein 6g	
Vitamin A 0%	Vitamin C 0%
Calcium 8%	Iron 6%
Vitamin E 35%	Folate 4%
Magnesium 20%	

*Percent daily values are based on a 2,000 calorie diet.

Location of Origin

Along with nutrition, consumers are increasingly passionate about where their food comes from. Interest in the stories behind food sources, support for local suppliers, a desire for ethnic-style lines, and the demand for regional authenticity has never been higher.⁵

According to Innova Market Insights, the chocolate industry in particular has pioneered the practice of identifying the origin of specific cacao varieties used in their premium products.⁵ These stories and this traceability is what differentiates a premium product from the rest.⁵ And almonds are an ingredient with a story that is literally short and sweet: California's Central Valley has a unique Mediterranean climate and soil that makes it the only place in the U.S. – and one of just a few places in the world – where almonds can be grown successfully.

Safe & Stable Supply

To keep up with demand responsibly, the Almond Board of California invests more than \$2 million a year to research production and environmental factors to continually evolve best practices. California's community of almond growers is particularly committed to sustainable** agricultural practices as nearly 90 percent of California almond farms are family operations, owned in large part by third and fourth generation farmers who plan to pass down their land and way of life to their children and grandchildren.⁶ These growers recognize the need to carefully manage resources for current and future generations, offer continued work for their employees, and ensure clean air and water for their families and neighbors.

The Almond Board of California's Food Quality and Safety Program is continually evolving to ensure almonds are produced in a safe, responsible manner, so manufacturers and consumers around the world can have the highest level of confidence in their almonds.



DID YOU KNOW?

ONE-OUNCE OF ALMONDS CONTAINS A SIMILAR AMOUNT OF TOTAL POLYPHENOLS AS ONE CUP OF GREEN TEA AND ½ CUP OF STEAMED BROCCOLI.⁴



On the Shelf

Almonds have some serious staying power if stored properly. When kept in cool, dry conditions (<40°F and <65% relative humidity), whole natural almonds can be stored for about two years with no significant loss in quality.

Almonds are a versatile and high-quality ingredient that adds to the allure of chocolate and heightens consumer appeal of chocolate products. According to 70 percent of consumers, chocolate with almonds is **more premium and interesting**.³ And now, manufacturers have more reason than ever to **crunch on California almonds**.

Craving more?

Visit www.almonds.com/almondsandchocolate for recipes, research and technical information.

*One serving of almonds (28g) has 13g of unsaturated fat and only 1g of saturated fat.

**Sustainable almond farming utilizes production practices that are economically viable and are based upon scientific research, common sense and a respect for the environment, neighbors and employees. The result is a plentiful, nutritious, safe food product.

References:

1. Global Confectionery Overview, Euromonitor International. July 2014.
2. Global New Product Introductions Report, Innova Market Insights. May 2014.
3. Global Chocolate Study, Sterling Rice Group. September 2014.
4. Milbury, P.E.; Chen, C.; Dolnikowski, G.; Blumberg, J. Determination of flavonoids and phenolics and their distribution in almonds. J. Agric. Food Chem, 2006, 54,5027-5023.
5. Chocolate Report, Innova Market Insights. October 2014.
6. UC Drought Management – Historical Almond ET, see and Goldhamer, David. 2012.

