Marketing by the Numbers

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Vice President, Global Market Development
Almond Board of California

LAUREL MUIR
Managing Partner, SRG
Almond Board of California—VISION AND MISSION STATEMENTS

VISION
California Almonds make life better by what we grow and how we grow.

MISSION
Expand global consumption of California almonds through leadership in strategic market development, innovative research, and accelerated adoption of industry best practices.
ALMOND BOARD MARKETING OBJECTIVES

1. Build long-term world-wide demand for California almonds
2. Create an environment in which almond perceptions and almond brands thrive
3. Address issues and seize opportunities that are best handled at an industry-wide level
4. Contribute to the financial well being of the industry
11 MARKETS WITH PROGRAMS

NORTH AMERICA
- Canada
- U.S.
- Mexico

EUROPE
- UK
- France
- Germany
- Italy

ASIA
- China
- India
- S. Korea
- Japan
Marketing by the Numbers
439%
COMPARISON TO GROCERY GROWTH

2013-2017 CAGR

- Extra Small: 4.3%
- Small: 3.6%
- Mid-size: 1.9%
- Large: 1.1%

2018 CATEGORY GROWTH RATES

- Ice Cream: 1.8%
- Cereal: 0.3%
- Chocolate Candy: -1.3%
# Growth Across Farming

<table>
<thead>
<tr>
<th>Crop</th>
<th>20 Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybeans</td>
<td>1.5%</td>
</tr>
<tr>
<td>Corn</td>
<td>2.0%</td>
</tr>
<tr>
<td>Table Grapes</td>
<td>2.7%</td>
</tr>
<tr>
<td>Wine Grapes</td>
<td>2.3%</td>
</tr>
<tr>
<td>Strawberries</td>
<td>2.8%</td>
</tr>
</tbody>
</table>
ALMOND FORMS HAVE EXPLODED

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>TOTAL NEW PRODUCTS</td>
<td>11,152</td>
<td>42,532</td>
</tr>
<tr>
<td>BY INGREDIENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Almond</td>
<td>10,654</td>
<td>39,344</td>
</tr>
<tr>
<td>Almond Flour</td>
<td>185</td>
<td>1,112</td>
</tr>
<tr>
<td>Almond Butter</td>
<td>260</td>
<td>910</td>
</tr>
<tr>
<td>Almond Milk</td>
<td>9</td>
<td>760</td>
</tr>
<tr>
<td>Almond Oil</td>
<td>43</td>
<td>328</td>
</tr>
<tr>
<td>Almond Protein</td>
<td>0</td>
<td>66</td>
</tr>
<tr>
<td>Almond Milk Powder</td>
<td>0</td>
<td>11</td>
</tr>
</tbody>
</table>
AND WHERE ALMONDS ARE FOUND IN THE GROCERY STORE HAS EVOLVED

2006:
38% Snack almonds
62% Ingredient

2019:
54% Snack almonds
19% Almond milk
6% Almond butter
21% Ingredient
3%
FARM PRICE HAS BEEN MOVING UPWARD

Farm Price per Pound

98/99 99/00 00/01 01/02 02/03 03/04 04/05 05/06 06/07 07/08 08/09 09/10 10/11 11/12 12/13 13/14 14/15 15/16 16/17 17/18 18/19

- 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50

Farm Price/lb  Linear (Farm Price/lb)
LEADERSHIP ROLE IN WORLD OF FOOD AND AG

California’s Top Ten Valued Commodities
2018 | millions USD

Dairy Products: $6,370
Grapes: $6,250
Almonds: $5,470
Cattle, Calves: $3,190
Pistachios: $2,620
Strawberries: $2,340
Lettuce: $1,810
Floriculture: $1,220
Tomatoes: $1,200
Oranges: $1,120

Top Ten U.S. Specialty Crop Exports by Value
2018* | millions USD

Almonds: $4,531
Pistachios: $1,736
Wine: $1,399
Walnuts: $1,281
Frozen Potatoes: $1,159
Fresh Apples: $1,010
Coffee: $885
Fresh Grapes: $785
Fresh Berries: $710
Fresh Oranges + Tangarines: $690

Source: California Department of Food and Agriculture Statistics. https://www.cdfa.ca.gov/Statistics.

LOOKING BACK...
HOW DID THIS HAPPEN
PRE-2000’s ALMOND SUFFERED FROM MISPERCEPTION
HOWEVER OVER TIME CALIFORNIA ALMONDS MEANING HAS EVOLVED

HEART HEALTHY

HEALTHY NUT

LIFESTYLE NUT
4 KEY ELEMENTS

+ Redefining our importance in health

+ Changing how almonds fit in people’s lives

+ Relevant to how people eat

+ Staying focused on the long-term
BUILDING OUR UNDERSTANDING OF ALMONDS AND NUTRITION

HEART HEALTH:
- 22 Research Projects
- 34 Scientific Publications to Date

DIABETES AND METABOLIC SYNDROME:
- 20 Research Projects
- 19 Scientific Publications to Date

WEIGHT MANAGEMENT, SATIETY AND GUT HEALTH:
- 26 Research Projects
- 45 Scientific Publications to Date

SKIN HEALTH:
- 2 Research Projects
- 1 Scientific Publication to Date

OTHER AREAS OF RESEARCH:
- Cognition
- Gut Microbiome
- Composition and Calorie Count
HEALTHY FATS & PROTEIN TOPPED THE DIET TRENDS
SHIFTING FROM INGREDIENT TO SNACKING

1999
Almonds Are In

2001
Talking Almonds

2005
Best of Both Worlds

2007
How To

2010
A Handful Of…

2013
Crunch Power

2018
Own Your Everyday
CONSUMER PERCEPTIONS

**US**
Snacking has been on a dramatic rise since 2005

**INDIA**
Highest health scores and continued growth

**MEXICO**
Heavy Users have jumped in the last two years

**CANADA**
Almonds rank #1 top in all category association

**CHINA**
Almonds rank #1 top snack association

**JAPAN**
Almonds top nut snacking and Crunch delivers

**ITALY**
In just two years, almonds beat out walnuts

**S. KOREA**
Almond awareness has tripled since 2011

**UK**
#1 Health Awareness

**US**
#1 Snacking, Chocolate and Bakery

**UK**
#1 Snack nut association

**JAPAN**
81% most crunchy

**S. KOREA**
3.5X increase in awareness

**FRANCE**
Almond awareness has doubled since 2011 and health scores on top

**GERMANY**
Snacking opportunity. Market firmly entrenched in ingredient

**US**
Highest health scores

**INDIA**
Heavy Users

**MEXICO**
#1 Snacking, Chocolate and Bakery

**CANADA**
68%

**CHINA**
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3.5X increase in awareness

**FRANCE**
2X awareness

**GERMANY**
Strong bakery associations

**US**
Rise of Snacking

**INDIA**
Highest health scores and continued growth

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OPPORTUNITIES AND CHALLENGES AHEAD
KEY CHANGE FORCES

- Trade Wars Center Stage
- Anxiety and Desire for Control
- Plants Rule
- Snackification of Society
- Innovate Everything
POLITICAL & TRADE CHALLENGES
In 2019, ABC actively addressed almond-related issues in several key markets.
WELCOME TO THE ANXIETY ECONOMY
ANXIETY ECONOMY

**DRIVERS**
- Privacy
- Environmental crisis
- Workplace stress
- Political upheaval
- Brexit

**RESULTS**
- Behavior driven by fear
- Dystopic landscapes
- New categories
- The sex recession
DIETS CONTINUE
3 PLANTS RULE
HEALTH

we're eating nearly twice the protein we need
More Plant Foods, Less Meat

a public health consensus
TASTE

New Menu Introductions

- seeds
- pulses
- lentils
- pork
- beef
- chicken
PURCHASE INTENT PRIMARY PROTEIN SOURCE

Nuts: 58%
Beans: 55%
Peanuts: 55%
Lentils: 38%
Quinoa: 38%
Wheat protein: 32%
Soy protein: 30%
Pea protein: 26%
Tofu/tempeh: 26%
Mycoprotein: 15%
Eat less meat to save the Earth, urges UN
<table>
<thead>
<tr>
<th></th>
<th>Gen Z</th>
<th>Millennials</th>
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<tbody>
<tr>
<td>Social Mission</td>
<td>176</td>
<td>159</td>
</tr>
<tr>
<td>Convenience &amp; Packaging</td>
<td>146</td>
<td>119</td>
</tr>
<tr>
<td>Experimental</td>
<td>133</td>
<td>121</td>
</tr>
<tr>
<td>Brand</td>
<td>94</td>
<td>103</td>
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<tr>
<td>Value</td>
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<td>91</td>
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<tr>
<td>Taste</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>Health &amp; Wellness</td>
<td>88</td>
<td>84</td>
</tr>
</tbody>
</table>
FOOD WASTE & SUSTAINABILITY
REDUCING FOOD WASTE REQUIRES CONSUMER, CPG AND AGRICULTURE ACTION

Last Week In Venture: Tackling Food Waste, Fitting As-A-Service, And Ghosting VCs

To Reduce Food Waste, FDA Urges 'Best If Used By' Date Labels
Confusion over whether a food is still safe to eat after its "sell by" or "use before" date accounts for about 20% of food waste in U.S. homes, the FDA says. The new wording aims to clear that up.

“Ugly produce” subscription service helps reduce food waste, expands to Alabama

11 practical ways you can reduce food waste and save money
HOW WE USE

PREVENTION SOLUTIONS

Packaging, Product, And Portions
- Standardized Date Labeling
- Packaging Adjustments
- Spoilage Prevention Packaging
- Produce Specifications (“Imperfect Produce”)
- Smaller Plates
- Trayless Dining

Operational And Supply Chain Efficiency
- Waste Tracking & Analytics
- Cold Chain Management
- Improved Inventory Management
- Secondary Resellers
- Manufacturing Line Optimization

Consumer Education
- Consumer Education Campaigns

RECOVERY SOLUTIONS

Donation Infrastructure
- Donation Matching Software
- Donation Storage & Handling
- Donation Transportation
- Value-Added Processing

Donation Policy
- Donation Liability Education
- Standardized Donation Regulation
- Donation Tax Incentives

RECYCLING SOLUTIONS

Energy & Digestate
- Centralized Anaerobic Digestion (AD)
- Water Resources Recovery Facility (WRRF) with AD

On-Site Business Processing Solutions
- In-Vessel Composting
- Commercial Greywater

Agricultural Products
- Community Composting
- Centralized Composting
- Animal Feed
- Home Composting
HOW WE GROW
THE IMPORTANCE OF SNACKING
SNACKING CONSUMPTION

Estimated values in Billion USD for 2019.
KEY DRIVERS:

• Fast-paced lifestyles that embrace ready-to-eat foods.
• Decline in sit-down family meals.
• Rise in eating alone both at home and at work.
• Belief that smaller, more frequent meals are healthier.

THE “SNACKIFICATION” OF SOCIETY CONTINUES TO REDEFINE WHAT A SNACK IS.
## The Soaring Snack Business

<table>
<thead>
<tr>
<th>Salty Snacks</th>
<th>Sweet Snacks</th>
<th>Savory Snacks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salty Snacks</strong></td>
<td><strong>Sweet Snacks</strong></td>
<td><strong>Savory Snacks</strong></td>
</tr>
<tr>
<td>$83B</td>
<td>$110B</td>
<td>Nuts, Seeds, &amp; Trail Mixes</td>
</tr>
<tr>
<td><strong>Savory Biscuits</strong></td>
<td><strong>Sweet Biscuits</strong></td>
<td>$27B</td>
</tr>
<tr>
<td>$26B</td>
<td>$73B</td>
<td><strong>Snack Bars</strong></td>
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<tr>
<td><strong>Other Savory Snacks</strong></td>
<td><strong>Packaged Cakes</strong></td>
<td>$14B</td>
</tr>
<tr>
<td>$18B</td>
<td>$33B</td>
<td></td>
</tr>
<tr>
<td><strong>Popcorn</strong></td>
<td><strong>Packaged Pastries</strong></td>
<td></td>
</tr>
<tr>
<td>$5B</td>
<td>$26B</td>
<td></td>
</tr>
<tr>
<td><strong>Pretzels</strong></td>
<td><strong>Gum</strong></td>
<td></td>
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<tr>
<td>$3B</td>
<td>$21B</td>
<td></td>
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<tr>
<td></td>
<td><strong>Fruit Snacks</strong></td>
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<tr>
<td></td>
<td>$11B</td>
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</tr>
<tr>
<td></td>
<td><strong>Chilled Dairy Desserts</strong></td>
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</tr>
<tr>
<td></td>
<td>$10B</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Frozen Desserts</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$5B</td>
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OPPORTUNITIES

Fortified Snacking
Foods that offer extra nutrients added are appealing to consumers looking for snacks that are more than merely a treat.

Protein Rich Snack
A big opportunity to target the on-the-go consumers looking to satisfy a craving and boost energy levels.

Snack meal
Snacks as meal replacements are a growing opportunity.

Flexible packing for on-the-go
Pouch packaging, single serves, and re-sealable packaging can increase portability and help reduce waste.
5. THE ANSWER IS INNOVATION
HEALTH DRIVING ALMOND FLOUR

Locako Peanut Butter Collagen Brownies
Australia, Nov. 2019

Berries And Nuts Almond Flour
India, Oct. 2019

Organic And Gluten Free Sicilian Lemon Sponge Cake
France, Sep 2019

Ambronite Balanced Meal Shake: Delicious Berries Flavor
Finland, Sep 2019
ANALOGUES DRIVE ALMOND MILK

Starbucks Almond Milk Caffe Mocha: Chilled Espresso Beverage
US, Sep 2019

Nakula Almond and Coconut Milk Yoghurt: Vanilla
Australia, Oct 2019

Blue Diamond Almond Breeze Vanilla Flavored Almond Milk Yogurt Alternative With Sea Salt Caramel Flavored Slivered Almonds
US, Oct 2019

Mama Roz Green Protein Oat and Almond Milk
Indonesia, Aug 2019
ALMOND BUTTER MORE THAN BUTTER

Base Culture 7 Nut And Seed Bread
United States, Apr 2019

Nature Valley Biscuits With Almond Butter
Kuwait, Apr 2019

Chobani Plain Greek Yogurt With Almond Butter
United States, Jun 2019

Probar Meal On The Go Blueberry Muffin
United States, Sep 2019
KEY CHANGE FORCES

- Trade wars center stage
- Anxiety and desire for control
- Plants rule
- Snackification of society
- Innovate everything
CAPITALIZING ON THE FUTURE
Upside exists in snacking and ingredient usage.
8 MARKETS UNDER 2 POUNDS

<table>
<thead>
<tr>
<th>Country</th>
<th>17/18</th>
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<tbody>
<tr>
<td>UNITED STATES</td>
<td>2.2</td>
</tr>
<tr>
<td>GERMANY</td>
<td>2.0</td>
</tr>
<tr>
<td>CANADA</td>
<td>2.0</td>
</tr>
<tr>
<td>FRANCE</td>
<td>1.6</td>
</tr>
<tr>
<td>ITALY</td>
<td>1.5</td>
</tr>
<tr>
<td>SOUTH KOREA</td>
<td>1.1</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>0.8</td>
</tr>
<tr>
<td>JAPAN</td>
<td>0.6</td>
</tr>
<tr>
<td>MEXICO</td>
<td>0.2</td>
</tr>
<tr>
<td>INDIA</td>
<td>0.2</td>
</tr>
<tr>
<td>CHINA/HONG KONG</td>
<td>0.2</td>
</tr>
</tbody>
</table>
PORTFOLIO APPROACH

Emerging/Established/Exploratory

Geographical Dispersion

Middle class

Stable Politics

Home ownership

A car

Health and retirement security

Family vacations

A college education for the kids
ALMOND BOARD MARKETING
OBJECTIVES

• Build long-term world-wide demand for California almonds

• Create an environment in which almond perceptions and almond brands thrive

• Address issues and seize opportunities that are best handled at an industry-wide level

• Contribute to the financial well being of the industry
ALMOND BOARD MARKETING STRATEGIES

1. Invest and develop foundational platforms for industry long-term growth

2. Disciplined, data-driven strategic approach to market development

3. Highly creative, targeted, best-in-class marketing programs
14.7 BILLION
THINGS TO LOOK FOR THIS YEAR
NEW ADVERTISING
MOMENTS OF RELEVANCE
NUTRITION RESEARCH COMMITTEE

MEMBERS:
- Dr. George Goshgarian
  Chair
  Goshgarian Enterprises
- Maggie Moon
  Vice-Chair
  The Wonderful Company
- Dr. Rudy Ortiz
  UC Merced
- Stacey Humble
  Roberts Ferry Nut Co.
- Billy Ng
  Blue Diamond Growers
- Kurt Waananen
  Blue Diamond Growers

ALTERNATES:
- Jan Mendenhall
  UC Merced (Retired)
- Christine Gemperle
  Blue Diamond Growers
THANK YOU TO OUR INDUSTRY
Marketing by the Numbers

EMILY FLEISCHMANN
Vice President, Global Market Development
Almond Board of California

LAUREL MUIR
Managing Partner, SRG
REGIONAL PRESENTATIONS AT CONFERENCE

North America
Jenn Freeman
Thursday
9:45-10:30

India
Sudarshan Mazumdar
Wednesday
2:15-3:15

Europe
Dariela Roffe-Rackind
Wednesday
10:45-11:30

China
Connie Cheung
Wednesday
8:00-9:00

South Korea & Japan
Murielle Kim
Wednesday
3:30-4:30