

2018 ANNUAL REPORT

*The Super Fun  
Superfruit*



# MISSION, VISION & STRATEGIC PRIORITIES 2018-2020

2018 marked the beginning of a new three-year strategic plan which propels the National Mango Board (NMB) toward a more integrated approach to all programs.

**MISSION:** Increase the consumption of fresh mango in the U.S. by inspiring consumers and educating them about the culture, flavor, and nutrition of mangos, while bringing the industry together.

**VISION:** For mangos to move from being an exotic fruit to a daily necessity in every U.S. household.

Our five strategic priorities provide the roadmap for how we will achieve these.

## STRATEGIC PRIORITIES:

- 1. Deliver High-Quality & Flavorful Mangos** Establish and maintain a consistent high-quality product and improve the flavor profile as delivered to the consumer.
- 2. Market Positioning** Deeply understand our strategically most valuable audience(s) and develop a clear, long-lasting, inclusive positioning/messaging platform which is consistent across channels.
- 3. Consumer Education** Understand and dimensionalize key consumption barriers and create and execute strategies to enhance consumer familiarity and understanding.
- 4. Market Penetration** Drive mango market penetration at retail and foodservice.
- 5. Industry Service** Improve value-add and industry satisfaction for the mango industry.



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# MESSAGE FROM THE EXECUTIVE DIRECTOR

It is my distinct honor to share with you the National Mango Board's 2018 Annual Report.

Since 2005, the NMB has proudly worked jointly with the industry to increase consumer demand for fresh mango, while also finding solutions to the most pressing challenges facing our industry.

Through this collaboration, combined with the NMB's research programs, marketing campaigns, and industry outreach efforts, we are making significant progress toward our vision of mangos becoming a daily necessity in every U.S. household.

In 2018, although overall mango supply experienced a minimal decrease due to weather related events, we continue to see a constant increase in consumer familiarity and understanding of mango. **This is why maintaining a consistent high-quality product and improving the mango eating experience is one of our top priorities.** The NMB's research programs focus on ensuring that up-to-date mango handling best practices are readily available throughout the supply chain, from growers all the way to retailers.

Two important areas of focus are the ripening and fresh-cut quality programs. Since 2016, the NMB has increased the number of retailers with mango ripening programs from 6 to 16, and we are actively collaborating with processors to improve fresh-cut quality as well. These efforts are generating excellent results, with improvements in consumer satisfaction and continued repeat purchases, which we expect will continue to strengthen.

The NMB's commitment to adding value by increasing demand through market penetration is stronger than ever, as we implement integrated marketing strategies at the consumer, retail, and foodservice levels.

**In 2018, we focused on developing and driving a consistent brand message across all marketing channels, with information that would overcome the barriers to consumption and inspire consumers at key moments in their unique mango journey.**

The overall result is that mango demand is increasing, and in 2018 the NMB's marketing efforts boosted overall market penetration by a remarkable additional 63%!

Finally, the NMB continues to improve the mango industry's expertise and knowledge base by providing research studies, extension meetings, and education sessions that are relevant and beneficial to all levels of the industry. In 2018, the NMB finalized the "Mango Sustainability Workbook" and launched a website dedicated to this topic. We provided training for industry members who want to develop and track their sustainability programs, and also offered comprehensive Food Safety training resources.

I invite you to review this annual report to see how the mango industry's funds are invested and the results that are achieved. The success you will see in these pages is attributed to the tremendous effort of the NMB staff, board members, and all the partners that work together. On behalf of everyone who forms part of the NMB, we thank the mango industry for its continued support.

*All the best and much mango success to you!*



**Manuel Michel**  
Executive Director

## MESSAGE FROM THE CHAIRMAN

2018 marked the first year of a new strategic plan for the NMB. This plan focuses on consumer dynamics and delivering a more consistent flavor experience as key elements to increase mango consumption.

My father who lived to 102 years old and was in the produce industry all his life, always consumed massive amounts of fruits and vegetables, but would ask for mango daily over other fruits because of the enormous flavor satisfaction he received. **The pleasure and enjoyment that consumers experience from this exceptional fruit can be seen in the expressions of both young and old consumers from all walks of life.** This is the momentum the NMB is experiencing. This is the future of mango consumption in the U.S.

The NMB's new brand identity and marketing campaign, "Go Mango! The Super Fun Superfruit!" has been a winner. It focuses on driving the consumer of today, while also developing the consumer of tomorrow. In today's world, digital and social media influence and educate consumers more than ever before. The NMB is using these channels to educate consumers on nutritional and wellness aspects, recipes, and the culture of mango. In addition, we partnered with well-known influencers, celebrities, and created the "Mango Tribe" to inspire and deliver mango messages throughout the year. All combined, the NMB generated over 1.46 billion impressions during the year!

Another important 2018 revamp was to integrate our new brand and messaging across all the NMB marketing channels, including retail marketing. The updated point of sale materials and new display bin design draws consumers in and educates them on mango by emphasizing key messages and highlighting the fruit's wholesomeness. The NMB also expanded promotions during the autumn and winter seasons sending a clear message that "Mangos are available year-round!"

During the Mango Reception at PMA Fresh Summit, we proudly recognized a retailer that has incorporated the NMB's marketing, merchandising, and handling practices and is now moving triple the national average of volume per store. It is a clear example of the opportunity ahead.

In conjunction with the mango industry, the NMB continues to advance the ripening program and has also started work with fresh-cut processors with the purpose of delivering a more consistent eating experience, enhancing the mango flavor profile, and increasing overall consumer satisfaction. All these efforts are growing retail sales and will continue expanding the value of mango into the future.

Our strategic plan also emphasizes nutrition and health research. A pilot study was published in 2018 on gut inflammation and constipation related to the nutrients found in fresh mango. Further research is needed but the results are encouraging.

It has been my honor to serve as chairman and see how the NMB team successfully repositions mango towards becoming a household necessity. The team works cohesively, tirelessly, and embraces innovation in all they do. **Most importantly, they make sure that the assessment investment is producing the best results possible for the mango industry.** I am very excited with the progress we made this year and the plans we have for 2019.

*Congratulations to the staff and the Board for all your efforts!*



**Michael Warren**  
Chairman

# 2018 BOARD OF DIRECTORS



**Michael B. Warren**  
Chairman,  
Importer District 1

**JoJo Shiba**  
Vice-Chair,  
Importer District 2

**Marsela McGrane**  
Secretary,  
Importer District 4

**Chris Ciruli**  
Treasurer,  
Importer District 3

**Jiovani Guevara**  
Marketing  
Committee Chair,  
Importer District 3

**Patrick F. Dueire**  
Research Committee Chair  
First Handler

**Tomás Paulin Quezada**  
Industry Relations Officer  
Foreign Producer

**Carlos R. Palafox**  
Foreign Producer

**Cesar Morocho Marchan**  
Foreign Producer

**Eddy Martinez**  
Foreign Producer

**Jacque Swett**  
Foreign Producer

**Jerry Garcia, Sr.**  
Importer District 2

**Joaquin Balarezo Valdez**  
Foreign Producer

**Norberto Galvan Gonzalez**  
Foreign Producer

**Stuart Johnson**  
Domestic Producer

**Susan Underwood**  
Importer District 1

**Thomas Hall**  
Importer District 2

**Veny L. Marti**  
Domestic Producer

**Greg Golden**  
Ex-Officio  
Importer District 2

## FINANCIALS

BDO USA, LLP, accountants and consultants, audited the NMB financial statements of fiscal 2018 and issued a report on April 24, 2019. The audit was conducted in accordance with auditing standards generally accepted in the U.S. and Government auditing standards. BDO USA, LLP also reviewed and tested the NMB internal control over financial reporting and compliance and found all practices to be in accordance with applicable laws, rules and regulations.

### Revenues

Assessments	\$8,019,572
Interest income	1,603
<b>Total revenues</b>	<b>\$8,021,175</b>

### Expenses

#### Program expenses

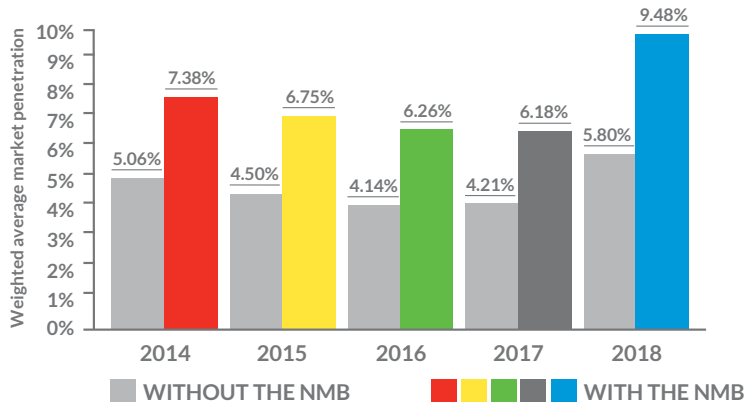
Marketing	\$4,321,288
Research	1,625,418
Board meetings	127,294
<b>Total program expenses</b>	<b>\$6,074,000</b>

#### General and administrative expenses

Overhead	\$497,411
USDA and U.S. Customs fees	171,056
Rent	89,930
Depreciation and amortization	45,046
<b>Total general &amp; administrative expenses</b>	<b>\$803,443</b>
<b>Total expenses</b>	<b>\$6,877,443</b>

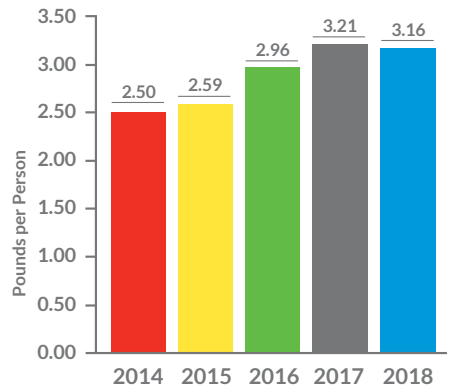
Change in net assets <i>without donor restrictions</i>	\$1,143,732
Net assets <i>without donor restrictions, beginning of year</i>	6,561,150
<b>Net assets <i>without donor restrictions, end of year</i></b>	<b>\$7,704,882</b>

# STATE OF THE MANGO INDUSTRY



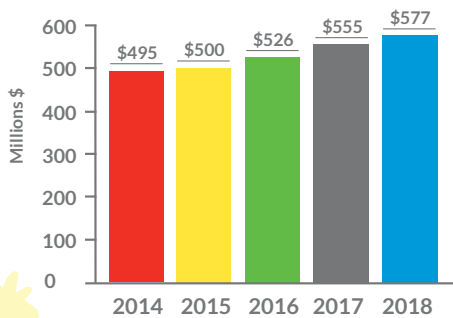
MARKET PENETRATION

MARKET PENETRATION WITH NMB EFFORTS RESULTED IN **↑ 51.5%** AVERAGE INCREASE FROM 2014 TO 2018



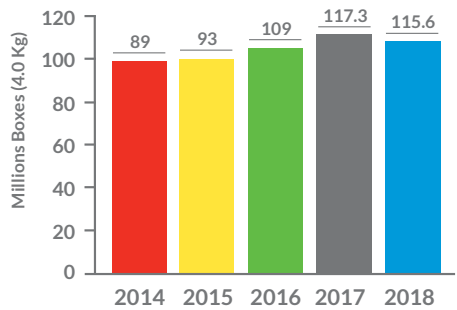
CONSUMPTION PER CAPITA

**↑ 26.4%** INCREASED FROM 2014 TO 2018



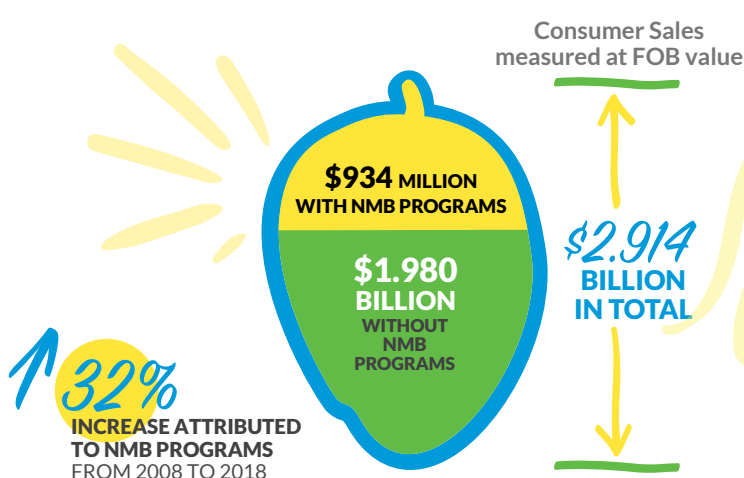
IMPORT VALUE

**↑ 12.5%** INCREASE IN VALUE FROM 2014 TO 2018

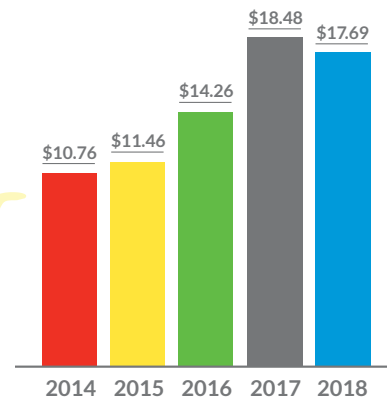


IMPORT VOLUME

**↑ 30.3%** INCREASE IN VOLUME FROM 2014 TO 2018



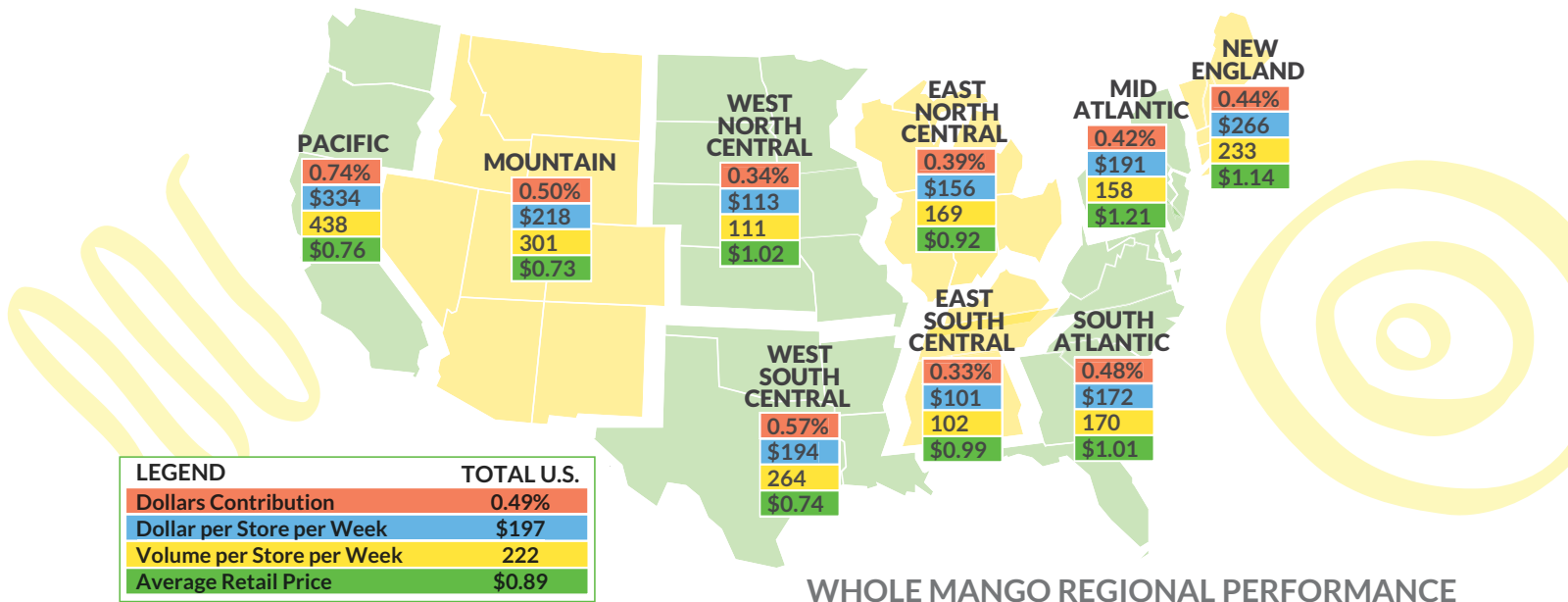
VALUE GENERATED BY NMB PROGRAMS



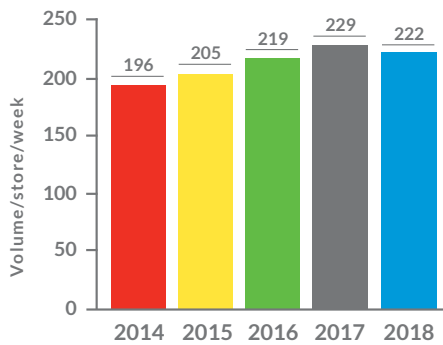
FROM 2008 TO 2018, FOR EVERY DOLLAR INVESTED IN THE NMB, THE INDUSTRY SAW A RETURN OF **\$17.69**

RETURN ON INVESTMENT

# MANGO PERFORMANCE



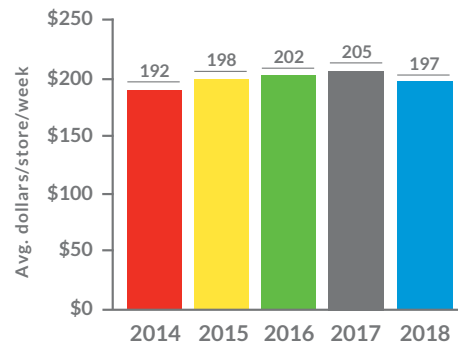
WHOLE MANGO REGIONAL PERFORMANCE



WHOLE MANGO VOLUME VELOCITY

↑ 13.3% INCREASE

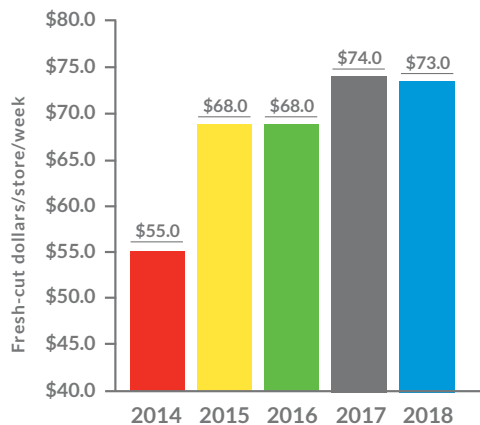
FROM 2014 TO 2018



WHOLE MANGO DOLLAR VELOCITY

↑ 2.6% INCREASE

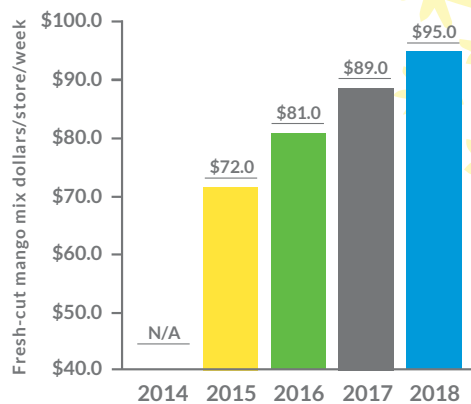
FROM 2014 TO 2018



FRESH-CUT MANGO PERFORMANCE

↑ 32.7% INCREASE

FROM 2014 TO 2018



FRESH-CUT MANGO MIX PERFORMANCE

↑ 31.9% INCREASE

FROM 2015 TO 2018


# 2018 HIGHLIGHTS

## **A New Brand Look and Feel!**

The NMB unveiled a new brand identity and strategy in 2018. The new style and creative combines consumer insights with inspiration from mango growing regions. This dynamic style exudes a super fun personality and brings to life the vibrant flavor of mango in exciting and unexpected ways.



 **63.4% increase in market penetration** over the prior year, for a record high of 9.48%.

 **10th consecutive year winning the Produce Business Marketing Excellence Award** for the “Go Mango! The Super Fun Superfruit!” campaign.

 **30 partners, including retailers, processors and distributors** participating in the Ripe and Ready to Eat Mango program, delivering ready-to-eat mangos to consumers nationwide.

 **1.469 billion consumer media impressions** including print, television and digital.

 **110% increase in mango on college and university menus** in the last four years.

 **Eight research projects completed** in 2018.

 **Mangos are #16 on the Top 20 Fruit List** in the The Packer’s “Fresh Trends Report”, moving up three spots from #19 the prior year.



New branding on mango display bins

## MARKETING PROGRAMS

In a survey conducted by the NMB in 2018, over a third (36%) of millennials said they would buy and eat more mangos if they knew they were in season all year. Seizing this opportunity, NMB marketing programs delivered a compelling and consistent brand message to educate consumers about the versatility and year-long availability of the various mango varieties.

Consumers of all ages are also increasingly concerned about health and wellness, and this is evidenced by the growing trend in adoption of vegetarian, vegan and flexitarian lifestyles. The NMB continued to share relevant mango nutrition information as the superfruit fits perfectly in meal plans for a balanced diet.

In addition, research conducted at Texas A & M University found that mangos were more effective in relieving constipation and reducing



**Mangos provide sweet relief for constipation**



intestinal inflammation than comparable amounts of fiber. In the four-week study, 36 men and women with chronic constipation were randomly divided into two groups: the mango group ate about 300 grams of mango a day (equivalent to about 2 cups or 1 mango), while the fiber group consumed a comparable amount of fiber powder, 1 teaspoon of psyllium fiber supplement (5 grams of dietary fiber).

Mango consumption was found to be more effective in reducing the symptoms of constipation and increased short-chain fatty acid levels, which indicate improvement of intestinal microbial composition. The mango group also experienced a reduction in certain biomarkers of inflammation, a benefit over fiber consumption. The study made headlines and was shared widely by media outlets such as Food Dive and Daily Mail.

## Inspiring and Educating Consumers Through Partnerships

The NMB continued into year two of a winning partnership with celebrity supermom Ayesha Curry. She added three new recipes, which had 27 million media and social impressions. This included two videos, which gained 787,000 views on YouTube. Over the 2-year period, the partnership with Ayesha has proven to be the most successful celebrity partnership in NMB history.

*Celebrity supermom, Ayesha Curry, shared a delicious salmon with mango and avocado salad recipe to celebrate Mother's Day in 2018.*



Wilmer Valderamma taught Americans how to “undress” a mango in a flirty Valentine’s day campaign that earned 30 million impressions.

*Wilmer Valderrama helped fans get over their mango cutting fears on Valentine’s Day 2018.*



The NMB achieved over 1.46 billion consumer media impressions\*, with coverage in top tier publications such as The Washington Post, Saveur and People.

\*Using revised measurement methodology in line with up-to-date industry best practices.



*New recipe - grilled mango with whipped honey ricotta cream - from Julie Gransee of Lovely Little Kitchen*

Foodie and nutrition bloggers, affectionately known as the “Mango Tribe”, developed 20 amazing new recipes and how-to guides to showcase the versatility of mangos for sweet and savory dishes and drinks. The Tribe shared key educational messages including year-round availability, how to choose and cut mangos and mango nutrition information, earning over 14 million impressions.



*Farm tour with media influencers in Guayaquil, Ecuador in October 2018*

The NMB hosted a media trip to Ecuador, where seven attendees were given a farm tour and immersed in mango culinary experiences which inspired mango coverage and content.

## Digital Strategies to Reach Key Audiences

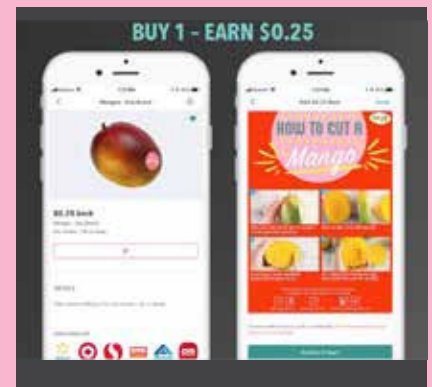
The *mango.org* website was refreshed to add a modern feel and easier navigation, with new functionality including search and commenting. The NMB undertook implementation of latest Search Engine Optimization (SEO) best practices for a stronger, more authoritative page. The mango blog covered mango education, nutrition and recipes, as well as culture and lifestyle. Blog pageviews more than doubled in 2018, increasing by an outstanding 107%.



The updated *mango.org* homepage



Pageviews of the mango blog doubled in 2018



Digital promotions on the Ibotta app which allows users to earn cash back on purchases moved 37,233 units during May/June, with 13 million impressions and 241,000 brand engagements.

Seven new videos were added to the NMB YouTube channel, including the “Mangos: Farmed With Love” video in celebration of Earth Day and new recipe videos. The NMB utilized paid amplification during the Big Game, Easter and Mother’s Day to inspire mango consumption during these key food moments and achieved 1.55 million video views, a 162% increase over the prior year, with 2.37 million minutes watched.

Overall, social media earned 7.1 million impressions and 400,000 engagements. Finally, the NMB and mango lovers around the world celebrated the launch of the mango emoji.



# EDUCATING RETAIL SHOPPERS

To attract and educate shoppers and move more mangos in-store, the NMB provided mango display bins to retailers and shippers nationwide.

6,000 display bins with mango selecting and cutting education were placed in stores, with 40 retailers and suppliers participating across the country.



The 2018 display bin featured a bright, bold new look as well as an eye-catching, new header and bright balloons for special occasions.

The Mango Mania Display Contest took place in-stores during July. The contest, in partnership with Tajín, generated eye-catching in-store displays during peak season and had outstanding results. There were 136 entries across 79 retailers and wholesalers, with over 4,800 point-of sale (POS) kits shipped.



Winner 7 or more registers 1st Place: Schnucks, Edwardsville, IL

There were over 6,000 mango demos/tastings in 2018, including over 200 demo partnerships with Tajín. The National Mango Board created 170 custom retail programs with 90 retailers, impacting over 52,000 stores.



Sampling mango with Tajín at the Lunar New Year Festival in Houston, TX in February 2018



Grilled mango in demos at Publix supermarkets during June 2018

New point-of sale material included a header card to showcase the nutrition benefits of mangos and a pallet wrap with educational messaging.



Mango Nutrition Header



Mango pallet wrap

## Strengthening the Mango Retail Supply Chain

The NMB continues to partner with and educate retailers to ensure that consumers have a high-quality product at the store level.

- The Ripe and Ready to Eat Program grew steadily, adding five participants to the program in 2018 for a total of 16 retail partners and 14 processors/distributors.
- The NMB team met with over 150 retail partners at tradeshows such as Southern Exposure, Viva Fresh Produce Expo and the New York Produce Show.



The NMB team at the New York Produce Show in December 2018. Photo credit: Fresh Plaza

- Mango University had 310 graduates and over 1,800 graduates since inception.
- The NMB hosted a Retailer Roundtable session and webinar, sharing tips on how to create and sustain mango sales 12 months of the year, attended by seven retailers.

Wakefern /Shoprite was recognized as the 2018 Mango Retailer of the Year for their outstanding commitment to quality mangos and year-round sales strategies.



Perno W. Young III (left) and Derrick S. Jenkins (right) of Wakefern/Shoprite were awarded the Mango Retailer of the Year at the Annual Mango Industry Reception at PMA Fresh Summit Conference & Expo in October 2018.

## MAKING STRIDES WITH FOODSERVICE

The NMB Foodservice program supported menu promotions and influenced menu items in over 16,000 units nationwide:

- Morrison Healthcare is part of the world's largest non-commercial foodservice company. 820 locations participated in a Limited Time Offer through the month of July, which featured a no-fry mango hand pie and NMB designed signage with mango nutrition information.



Mango hand pies at Morrison Healthcare



Omni Hotels Summer of Mango Menu



Rainbow toast at First Watch

- Omni Hotels & Resorts featured mango in their 2018 "Summer of Mango" poolside menu in 56 properties. Mango was featured prominently in both food and beverage menu items.
- First Watch ran a Limited Time Offer of a rainbow toast in 250 restaurants.

Other brands adding mango to their menus included Starbucks, Pinkberry, Qdoba and Jamba Juice.



New "Two to Mango" mocktail

The NMB reached foodservice target audiences with over 100 brands and 90,000 units in combined outreach and participation in events such as the National Restaurant Association's Marketing Executives Group conference, CAFE Leadership Conference, and the Flavor Experience.

The NMB also developed six new innovative cocktail and mocktail recipes and produced five videos in partnership with the Culinary Institute of America, which will be used in 2019 programs.

## Culinary Education and Media

Launched the Mango Bites quarterly newsletter geared to culinary, marketing, supply chain and distributor audiences



New Mango Bites newsletter

169 chefs took the NMB's culinary curriculum approved by the American Culinary Federation.

Hosted a mango master class at CAFÉ leadership Conference for culinary instructors, with a focus on pickling and fermentation, a top trend in food for 2018. 125 attendees from 83 culinary schools.



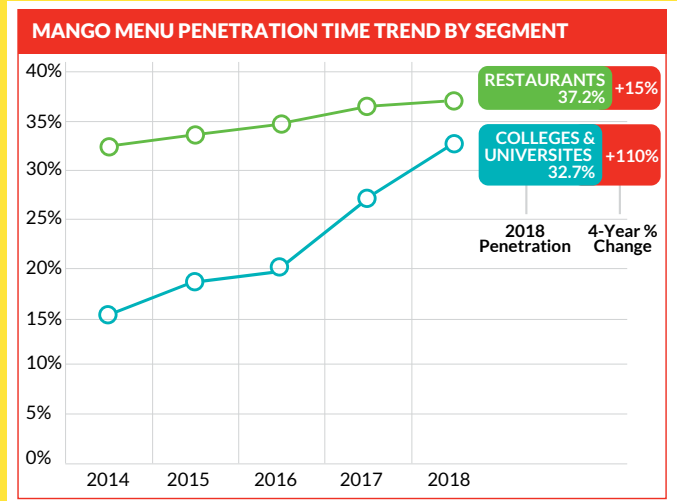
Mango master class for culinary instructors at the CAFE conference

The NMB achieved over 10 million foodservice media impressions. Foodservice content was also amplified via digital media, reaching 22,357 menu influencers and decision makers.



Custom newsletter featuring mango, in partnership with Restaurant Business

Mango is in the proliferation stage of the menu adoption cycle and has steadily increased menu penetration, reaching 37.2% in 2018. Colleges and universities have had an astounding 110% increase in mangos on menus over the past four years, driven by triple digit growth on breakfast, lunch and dinner menus.



Mango Menu Penetration (source: Dataessential February 2019)

# RESEARCH PROGRAMS

## Nutrition & Health Research

One of the main drivers for consumers to increase mango consumption is knowing the health and nutrition benefits of mangos. Three new nutrition studies were funded in 2018, two related to gut health and its effect on metabolic syndrome parameters and cognitive function, and one on the effect of mango consumption on skin health.

Four peer reviewed articles were published in 2018 by Dr. Susanne Talcott and her team from Texas A&M University.

- Findings from one pilot study (*Polyphenol-rich Mango Ameliorate Functional Constipation Symptoms in Humans beyond Equivalent Amount of Fiber*) indicated that eating mangos are more effective in relieving constipation and reducing intestinal inflammation than a comparable amount of fiber.
- Additional studies investigated the impact of mango consumption on Gut Health, Inflammation and Metabolic Activities in lean and obese individuals. Researchers concluded that additional research is needed to determine the mechanism of action involved in the role of mango polyphenols.



## Production & Post-harvest Research

The NMB continued work on a series of projects that started in 2017 and added three new projects in 2018:

- Finding new technologies to prevent irregular flowering in the main mango varieties consumed in the U.S.
- Developing a packaging protocol for packers, highlighting the best practices to deliver a quality mango.
- Literature review on existing technologies that extend the shelf life of mangos.

Projects completed and published in 2018 include:

- Literature review and interviews on magnesium fertilization and its influence on yield and fruit quality.
- Study validating ideal Control Atmospheres (CA) environmental conditions at 12.5° C to protect consumer quality of Hot Water Treated mangos.
- Evaluation of factors that influence the introduction, fate and mitigation of foodborne pathogens on mangos throughout the production chain.
- Mango Cultivar evaluation project during which a panel of mango experts reviewed a range of potential cultivars that have the attributes necessary for commercialization.



Given flavor and quality as a strategic priority, the NMB created a program to work to improve the quality of fresh-cut mango and worked with Dr. Carlos Crisosto of U.C. Davis, to provide technical advice and support to processors that have opted-in to the fresh-cut mango program. Similarly, the NMB is working with the USDA Agricultural Research Service and the University of Florida to test and validate technologies that can increase the shelf life and quality of fresh-cut mangos.



All projects were undertaken with the aim of improving mango quality and consumer satisfaction and strengthening the mango industry.

### Industry Tools and Outreach

In 2018, the NMB launched *mangosustainability.org*, a web hub for sustainability materials that have been developed. It contains comprehensive information for producers and packers to measure, track and implement sustainability practices to ensure that the industry has a positive impact on both people and the environment. Materials are available for producers and packers in both English and Spanish.

Ten outreach meetings were held in the six main mango-exporting countries to disseminate the results of research projects funded by the NMB and cover other topics of interest such as the impact of climate change in mango production, food safety, pruning techniques, management of flowering, post-harvest management, main diseases affecting mango, nutrition and fertilization, high density mango production and lenticels evaluation. In 2018, there were over 1,700 participants that attended NMB sponsored outreach meetings.

The NMB also organized very successful farm visits with researchers. During these visits, attendees had hands-on experience with issues affecting the crop and demonstrations by researchers showing how to improve farming practices.



New Sustainability Website



Hands on training during outreach in Retalhuleu, Guatemala in December 2018



NMB team, researchers and attendees at an Outreach meeting in Tapachula, Mexico in April 2018



The National Mango Board is an agricultural research and promotion program authorized by the Commodity Promotion, Research, and Information Act of 1996 (7 U.S.C. 7411-7425), and the Mango Promotion, Research, and Information Order, issued in 2004 (7 CFR 1206). The NMB is an instrumentality of the U.S. Department of Agriculture and receives oversight from the Agricultural Marketing Service, Specialty Crops Program, Promotion and Economics Division.



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