

From the **Grove**

The Latest News from the California Avocado Industry

Brand Advocates Continue to Generate Awareness and Educate Consumers About California Avocados
Read more on Page 18



IT'S ALL ABOUT
Picking the Best



Calavo[®]
THE FAMILY OF *fresh*

**CONTACT OUR FIELD OFFICES TO LEARN MORE
ABOUT BECOMING A GROWER FOR CALAVO**

Santa Paula: 805.933.9960 | Carpinteria: 805.566.2132 | Temecula: 951.676.2484

    | calavo.com | growerinfo@calavo.com

Jeff Oberman Uniquely Qualified to Lead CAC

See Story on Page 6



From the Grove

Volume 12, Number 3

Editor
Tim Linden
Champ Publishing
925.258.0892
tim.linden@ymail.com

Ad Sales
Tom Fielding
626.437.4619
tomfielding1@mac.com

Design/Layout
Heather Gray
User Friendly, Ink.
userfriendlyink@gmail.com

April Aymami
Industry Affairs Director
949.754.0738
aaymami@avocado.org



www.californiaavocadogrowers.com

In This Issue

- 6 Jeff Oberman Uniquely Qualified to Lead CAC
- 10 The University of California Avocado Breeding Program
- 12 Commission's Public Relations Program Inspires Brand Loyalty Among Targeted Consumers, Foodservice Operators, Retailers and Industry Members
- 18 Brand Advocates Continue to Generate Awareness and Educate Consumers About California Avocados
- 20 The Many Facets of the GEM Avocado
- 28 California Avocado Promotions at Retail
- 32 Showcasing California Avocados in Unique Foodservice Menu Presentations

The articles, opinions and advertisements presented in this magazine are designed to offer information and provoke thought. Inclusion in this publication does not presume an endorsement or recommendation by the California Avocado Commission for any particular product or cultural practice.

Fall 2022

Departments

- 4 Chair's Report
- 8 Handlers' Report

Volume 12, Number 3

Fall 2022

FROM THE GROVE is published quarterly by California Avocado Commission; 12 Mauchly, Suite L; Irvine, CA 92618. POSTMASTER: Send address changes to California Avocado Commission; 12 Mauchly, Suite L; Irvine, CA 92618.

Please join me in extending a warm welcome to the California Avocado Commission's new president, Jeff Oberman. I am absolutely thrilled that Jeff has joined our team. He is exceptionally well-qualified and will be a great fit in our organization and a great leader for our industry. Jeff has a deep knowledge of the fresh produce industry and has a keen sense of the challenges we face and opportunities we have as California avocado growers. He understands the complexity and unpredictability of our business. Jeff appreciates that our farming costs are up while our yields are variable and always vulnerable. He also understands what it takes to move a perishable product through the supply chain and that value must be created for avocado buyers and avocado consumers alike. But he also appreciates the role CAC can play, working with growers to drive higher yields and working with customers to drive higher demand. No doubt, it will take time for him to get his arms fully around our industry and the organization, but he is excited to learn and ready to lead. To learn more about Jeff's background, please see Tim Linden's profile on page 6.

Jeff started on October 10, just short of a year after Tom Bellamore

announced his retirement to the CAC Board of Directors. We knew it would take time to recruit a new president, but we certainly hadn't planned on it taking a year! In the end, I believe we found the right person, so the wait and effort were worth it, but I want to thank the growers, the staff and everyone in the industry for their patience throughout this process. Additionally, I want to thank the board and especially the Search Task Force for the many, many hours they put into this search. All in, the current and past directors on the Search Task Force interviewed 15 highly capable candidates and interviewed many of them multiple times through progressive rounds. These directors and past directors were dedicated to this effort, and I cannot thank them enough.

And finally, I want to express my gratitude to Ken Melban for stepping up to lead CAC during this transition. Through the summer and fall, Ken worked diligently to keep the operation running smoothly. Ken and the CAC team did an excellent job during this period, both managing the normal, predictable responsibilities of the business and responding to unplanned changes and unforeseen challenges. During this time period, Ken and the team identified opportunities



Rob Grether

for greater administrative efficiency, which should be sustainable well into the future. Additionally, once Jeff was identified as our next president, the CAC team wasted no time helping him get set up logistically so that he could hit the ground running. And there is no time to waste as the next month is going to be a busy one for the CAC team. At our October board meeting, we will set the assessment rate and budget for next year, and at the end of the month, much of the CAC team will head to Orlando for the IFPA Global Fresh Produce Show (formally known as the PMA Fresh Summit). In November, a new board of directors will be seated, the marketing team will be busy developing next year's program, and the team will start the annual financial audit. There is a lot to do, but we are in good hands with a new leader on board and strong leadership throughout the organization! 🍷

A handwritten signature in blue ink, appearing to read 'Rob Grether'.



**Thank you to all our
dedicated growers for your
hard work this season – we
look forward to continuing
our partnerships into 2023
and beyond!**

- Mission Produce

[Missionproduce.com/grow-with-us](https://missionproduce.com/grow-with-us)

Email: field@missionproduce.com

    [@mission_produce](https://www.instagram.com/mission_produce)

Jeff Oberman Uniquely Qualified to Lead CAC

By Tim Linden

Produce industry veteran Jeff Oberman has been engaged with all aspects of the produce supply chain in his 25-year career, leaving him uniquely qualified to serve as the new California Avocado Commission president. He started his new position on October 10.

“We are very pleased that Jeff Oberman has accepted the position of California Avocado Commission president,” said Rob Grether, chair of the Commission Board of Directors. “Jeff’s broad network, non-profit association leadership and fresh produce business experience, including an end-to-end understanding of the needs of growers, handlers, distributors, foodservice operators and retail customers makes him exceptionally well-suited to lead the California Avocado Commission.”

Oberman told *From the Grove* he is “honored to be joining a team with such a great culture.” In his 25 years in the industry, he has crossed paths with many members of the California avocado industry, including growers, handlers and the CAC staff. “Having the opportunity to take the helm and build on the California Avocado Commission’s well-deserved reputation for innovative marketing and grower advocacy is exciting. Like most agricultural producers, California avocado growers face a host of ever-changing challenges, and I look forward to steering the Commission in support of long-term grower success.”

He added that avocados have clearly been one of the top growth drivers in the produce industry for the past decade. “I see my mission as helping to continue that growth while representing California growers and working to maximize their returns.”

Oberman was born and raised in Ann Arbor, Michigan, where his father was a professor of pathology at the University of Michigan and well known for his work with breast cancer and AIDS research. Though Oberman bleeds Michigan blue, he graduated from the University of Missouri at Columbia with a degree in political science and economic geography.

He began his post-college career working for the Chicago Cubs but soon found a position with the National Institute of Health; his first foray into the regulatory environment.

In 1997, he joined United Fresh in Washington, D.C. to help

the organization create and launch a new trade show. For 21 years, Oberman worked for the produce trade association in successively more responsible roles. He always had the desire to move to the Golden State, which he did in 2001, to engage with the association’s membership. In fact, for more than half his tenure at United Fresh he served as vice president, trade relations.

Oberman has extensive experience in trade association leadership, strategic planning, and management of customer and government agency relations. He notes that he was serving the association in the Salinas Valley when the spinach crisis hit in 2006, giving him a firsthand look at crisis management and dealing with an unprecedented industry challenge.

In 2018, he left United Fresh and joined PRO*ACT, a leading foodservice supplier. For the past several years he has served as vice president of sales – business development, with an emphasis on building the company’s retail business. That became a chief driver of growth for PRO*ACT when the pandemic hit in the spring of 2020. He noted that connection as a buyer and seller of produce completed his personal journey to learn all aspects of the produce business, literally from boots on the ground in the field to working very closely with retailers both at United Fresh and with PRO*ACT.

In describing his own skill set, Oberman emphasizes his advocacy work with United Fresh, the real-life supply chain knowledge he gained at PRO*ACT, and the familiarity with all aspects of the fresh produce industry that was forged through countless hours of talking to association members and working to solve their individual issues.

Over the years, Oberman has received numerous accolades and awards including being named to *Produce Business* magazine’s “40 under Forty” list in 2005 and to *The Packer’s* “25 Profiles in Leadership” in 2017. He also served for two terms on the Board of Directors of the Fresh Produce & Floral Council.

Jeff has another close tie to the industry as his wife, Kyla Oberman, is the marketing director of California Giant Berry Farms. The couple, who have two children – 7-year-old Harper Rose and 3-year-old Hudson Austen – have already launched a family debate as to which commodity has the faster growth curve: avocados or berries. 🍓



FRESH DEL MONTE HASS

THE PARTNERSHIP YOU'RE LOOKING FOR!

The Del Monte® brand has been a symbol of product innovation, quality, freshness and reliability for over 135 years.



**LARGE & STRONG
CUSTOMER BASE RESULTING
IN HIGHER RETURNS**



**BEST IN CLASS
CUSTOMER SERVICE**



**INDUSTRY LEADERS
IN FOOD SAFETY**



CONTACT US TO LEARN MORE!

[FRESHDELMONTE.COM](https://www.freshdelmonte.com) | SALESINQUIRY@FRESHDELMONTE.COM

 DEL MONTE FRESH PRODUCE N.A., INC

Record Field Prices Highlight 2022

Though the 2022 California avocado crop was not great in volume and the end-of-the-season grove prices were lower than expected, a good portion of the season saw record prices with a sustained field price hovering around \$2 per pound during late spring/early summer.

"We saw grove price exceed \$2 per pound," said industry veteran Rob Wedin, senior vice president of Calavo Grown. "Not sure I've ever seen prices like that during the sweet spot of the season."

Wedin is retiring from Calavo Growers Inc. at the end of October after serving 49 years with the organization so if he hasn't seen it in his career, it probably hasn't happened. He noted that there have been periods in the past when the grove price spiked at the front or back end of the season but not for such an extended period in the middle of the season.

There were several factors that caused those high prices – including solid demand and excellent fruit – but Mexico's shortfall was the primary reason. "They had about a 300-million-pound shortfall from April into July, which was a surprise," he said.

Doing the math, Wedin said Mexico's volume was less than expected by an average of 15 million pounds per week for about a four-month period.

Very solid demand saw prices rise without a letup in demand for weeks on end. The FOB market soared with many California growers harvesting ahead of schedule to take advantage of the price per pound. By late summer, with Mexico's volume increasing and Peru sending many more avocados to the U.S. market than first anticipated, California had fewer avocados available for harvest. Late season growers did not get the market boost that has occurred the past several years, but most growers did well this year, Wedin observed.

Keith Blanchard, California field manager for Index Fresh, echoed the comments of Wedin. "We saw record-high pricing for a majority of the season," he said. "That inspired growers to harvest early and consequently we finished earlier than we usually do."

He added that the final numbers aren't in, but the Index executive suspects that the average price per pound at the grove was the highest ever. "The longevity of the high prices was something we haven't seen before," he said. "These were great returns for growers who had fruit. Unfortunately, there were areas that were light so not everyone participated in the great returns, but I would say most growers did."

A couple of executives from Mission also weighed in on the 2022 season. "Although California yields per acre

were generally variable from grove-to-grove in 2022, many producers experienced record-high fruit returns," said Gabe Filipe, senior director of California sourcing and farming.

He added that the company was able "to market our California avocados in key markets across the U.S. and internationally. Due to the high demand for locally grown products, our California-sourced fruit performs well in the market."

But Filipe noted that California growers continue to face several challenges associated with the drought, high temperatures and strong winds. In addition, increased input and labor costs are impacting total returns. "Inflationary pressures have tempered organic expansion in California due to the higher input costs associated with growing organic fruit," he said. "Most California growers are unable to capture enough of an economic premium to rationalize the switch from conventional growing practices."

Specifically talking about demand for the avocado in the marketplace and marketing strategies, Mission's Senior Category Manager Jennifer Anazawa said: "Demand for California avocados continued to surpass available supply during the 2022 season, which resulted in record-high fruit pricing."

She added: "In 2022, consum-

ers have been adapting their shopping behaviors in large part due to inflation, not only with respect to avocados but for many grocery items. Shoppers are becoming savvier, selecting to purchase particular sizes according to their usage plans and taking advantage of bagged avocados. They're also looking for coupons, checking circular ads and visiting multiple retailers in search of the best price."

Anticipating 2023

Turning his attention to the 2023 season, Blanchard said at this early juncture (mid-September) it appears the crop is going to be very similar in size to 2022. "It looks like we started out with a crop (on the trees) slightly south of 300 million pounds. We had some heat early on and some wind from a summer storm, especially in the south, that did produce some fruit drop. Nothing severe, but we did lose some fruit. It's very early to guess, but we're expecting a crop no larger than 270-280 million pounds."

Marketing conditions next spring and summer, as well as cultural reasons, will inform growers as to when they should start picking, but Blanchard said flexibility remains an important tool. He noted that 2022 turned out so well because growers and handlers were flexible and were able to take advantage of the strong market. He added that California fruit is in good demand with a great following so he expects there will be good marketing situations throughout next season.

"The key for us is to have a steady and consistent supply of California fruit to take care of the customers who demand it and are willing to pay a premium for it," he said.

He said growers should be in close contact with their handlers to determine the best time to harvest to take advantage of those opportunities.

While Blanchard expects solid marketing opportunities to emerge, he did say that for budgeting purposes, it would be a bit optimistic to be expecting the \$2 per-pound price much of the fruit received in 2022.

As of this writing in mid-September 2022, veterans in the avocado business can take an educated guess at the number of pounds expected in 2023, but they do emphasize that it's only a guess. Wedin of Calavo said his field people are guessing that the crop will be down about 15% from the expected final figure of about 270 million pounds this season. He said California's continuing drought, inconsistent temperatures during the bloom in May and a late summer heat wave appear to have combined to limit the potential crop.

The current market situation has Mexico expecting to send 3 billion pounds of avocados to the U.S. market during its July 1, 2022-June 30, 2023 crop year, according to Wedin. That almost assuredly means much more fruit on the market next spring than was there this past spring.

The Calavo expert said growers should take note of this possibility as they plan their harvesting strategy in the new year. He does not expect growers will be in a rush to unload their trees. On the other hand, he said the demand for California fruit from customers in the West should outstrip the supply. California does not operate in a bubble and the FOB price will certainly be influenced by the general market next year, but California growers will still be in a fairly strong position if the crop tonnage plays out as predicted. He said there will be no marketing need to get that fruit off the trees early. He suggests growers who can should consider waiting a bit longer and letting the fruit size to its full potential. 🥑



Board of Directors

District 1

Member/Jessica Hunter-**Secretary**
Member/Michael Perricone
Alternate/Vacant Seat

District 2

Member/John Cornell
Member/Ohannes Karaoghlanian
Alternate/Charley Wolk

District 3

Member/John Lloyd-Butler
Member/Robert Grether-**Chair**
Alternate/Maureen Cottingham

District 4

Member/Rachael Laenen-**Vice Chair**
Member/Jason Cole-**Treasurer**
Alternate/Catherine Keeling

District 5

Member/Andrew Prechtl
Member/Daryn Miller
Alternate/Will Carleton

Handlers

Member/Gary Caloroso
Member/Peter Shore
Alternate/Connor Huser

Public Member

Daniella Malfitano

To contact a CAC representative, please visit:
CaliforniaAvocadoGrowers.com/Commission/your-representatives

The University of California Avocado Breeding Program

By Tim Spann, PhD
Spann Ag Research & Consulting

In 2018, the California Avocado Commission decided to no longer fund the scion and rootstock breeding programs at the University of California, Riverside. This was not a decision that was made lightly. Over nearly four decades, California avocado growers, through CAC, had invested millions of dollars into these two programs but with little return.

On at least two separate occasions, the Production Research Committee had assembled an outside team of experts to review the breeding programs and make suggestions on how to improve them and move material through the selection process more quickly to produce new varieties and rootstocks for growers. However, the recommendations of these expert panels were never implemented by the University.

Furthermore, CAC always was frustrated by the slow pace of development from both the scion and rootstock programs. For example, the Uzi, Zentmyer and Steddom rootstocks that were released by UCR in 2012, were selected in 1993 and 1994 by John Menge (the UCR rootstock program is on its second leader since Menge's retirement). Ten years after their release, these rootstocks are marginally successful. Similarly, in the past 20 years the scion breeding program only has released two varieties, Harvest (2002) and a greenskin variety named BL 5-552 (2018). Both were originally selected by Bob Bergh (scion breeding program lead prior to Mary Lu Arpaia) and have seen essentially no commercial success.

Thus, in 2018, the drastic decision to cut all funding to the scion breeding program was made. For the rootstock breeding program, limited funding was continued with the specific goal of conducting commercial-scale trials of the most promising five rootstocks and, if worthy, move them to commercial release, but no funding was provided to develop more new selections.

Other Funding Partners Sought

Following this decision by CAC, UCR set off to find a new source of funding. They first circulated a plan among California growers and handlers looking to assemble a consortium to commit to providing \$1 million per year for 10 years. This

plan was met with no interest. They then began searching internationally for partners who would be interested in funding the avocado breeding program, eventually signing an agreement with Spain-based Eurosemillas, S.A. for \$2.25 million in 2020.

Eurosemillas has a long history of partnering with the University of California, most notably licensing citrus varieties. Their partnership with UCR for avocados will be developed under a program called Green Motion. Green Motion is being advertised as "an International Platform for leading avocado companies to accelerate plant innovation from science to market."

In recognition of the major investment by California growers in the UCR avocado scion and rootstock breeding programs, UCR has agreed that California growers will still have access to any material released under this new partnership with Eurosemillas and there will be no exclusive licenses issued within California. That is, any California nursery or grower who would like a license to propagate material released through Green Motion will be able to get one. These licenses will be managed by Eurosemillas/Green Motion.

Royalty structure proposed by Eurosemillas for the avocado variety UCR V04 (formerly BL-516/Marvel).			
	Scions	Pollinizer	Rootstock
Nursery	License Fee	License Fee	License Fee
Grower	Royalty per acre per year	Royalty per acre pollinated per year*	Royalty per acre per year
*Where the area planted or grafted with UCR V04 pollinizer is 50% or more, the value of the royalty shall be considered equal to that of a scion. For percentages of planted area less than 50%, the corresponding value shall be applied.			

New Royalty Model

On July 16, 2022, CAC Vice President of Industry Affairs Ken Melban and I met with representatives of the UCR Office of Technology Partnerships and Eurosemillas and were given a presentation about their proposed royalty program for new varieties.

The first variety planned for release under the new Green Motion program is a scion variety that growers may have heard of called BL-516 or “Marvel.” This is a variety that was originally selected by Bob Bergh and Gray Martin around the same time the GEM variety was selected. Gray believed that “Marvel” was an ideal pollinizer for GEM, but, as seems to be the norm, it has lingered in the system and never been released.

Under the new Green Motion program, the variety is being referred to as “UCR V04” and will not be named “Marvel” due to trademark infringement issues with the Marvel comics brand (they hold the trademark on “Marvel” as it relates to all fresh fruit, excluding strawberries). Green Motion also is promoting the variety as a pollinizer for Hass with fruit similar enough in appearance and with a similar ripening window such that it could be harvested right along with Hass.

The table on the facing column (page 10) was redrawn from what we were shown during our meeting as the proposed royalty structure for UCR V04. As you can see, the new structure is quite different from what California avocado growers are used to. Historically, growers paid a one-time per tree royalty at the time of tree purchase. The new model proposes nurseries pay a license fee for the right to propagate a new variety and the grower will pay an annual royalty in perpetuity based on the acreage planted.

We expressed our concern to the University and Eurosemillas representatives when this structure was presented. They were somewhat taken aback that we didn’t believe the California grower would view this structure favorably. Eurosemillas explained this is their model for citrus and other crops they license from the University elsewhere in the world and they couldn’t understand why we felt so strongly that this model would not succeed with California avocado growers.

We explained that there simply is no track record between the University and the California grower that gives the grower strong confidence in what is being released from the University’s breeding program. Unlike citrus, pistachios or walnuts, for example, the University of California does not have a long (or even short) list of successful

avocado varieties to point to. This fact was met with utter disbelief.

We ultimately settled on accepting that we would not be able to convince them of our viewpoint and left the meeting with the agreement that Eurosemillas would hold grower meetings to try to sell this idea to the California grower. We have not yet heard about any meetings being scheduled, but we will be sure to let the industry know if any meetings are scheduled.

At this point we do not know what the final plan is for releasing UCR V04 (aka “Marvel”). Our understanding is the original plan was to release it in late 2022, but the release has been delayed until sometime in 2023. Nor do we know what the final royalty structure will look like when UCR V04 finally is released. But rest assured, we will do everything in our power to ensure that new avocado varieties — both scions and rootstocks — are released to the California grower under a program that is fair and equitable. 🥑

**AVOCADO
SUPPORT
TOOL**
YIELD POTENTIAL CALCULATOR

What is Your Yield Potential and Why is it Important?
This service will analyze your leaf analysis data and our team will generate a customized and confidential report showing where your Avocado Orchard stands with respect to its yield potential.

This online tool, allows us to take your leaf analysis data and turn-around a detailed report of the priority ranking for each nutrient element and its quantitative importance in affecting potential fruit yields.

**OPTIMIZE YOUR
FERTILITY PROGRAM
& YIELD POTENTIAL
FOR AVOCADOS.**

iWannaGro
.com

The decision support tool (DST) developed with the support of CAC to help growers optimize tree nutrition for greater yields, is now available via a consulting service provided by Dr. David Crowley (UCR Retired.)

To get started, visit our website and follow the clear, simple prompts to receive your detailed leaf analysis today!

Interested Growers should visit the website: iwannagro.com.

Commission's Public Relations Program Inspires Brand Loyalty Among Targeted Consumers, Foodservice Operators, Retailers and Industry Members

Throughout the year, the California Avocado Commission utilizes its public relations program to build awareness of the seasonal availability and premium quality of California avocados among targeted consumers, foodservice operators, retailers and industry members. PR outreach — which includes press and mat releases, media coverage, chef and influencer partnerships, and in-person events — intensifies leading into and during the California avocado season to encourage distribution of and demand for California avocados with targeted customers and consumers. By sharing engaging educational content and recipes that demonstrate the versatility of the fruit, the Commission's integrated PR campaigns help expand usage in recipes both at home and in restaurants. Further, third party news stories showcasing CAC messaging provide additional exposure for the California Avocados brand and complement direct advertising campaigns designed to build loyalty.

Consumer public relations

As of July 31, the Commission's consumer PR program secured more than 952 million news bureau impressions across online, print and broadcast media. Those impressions are the result of the Commission's proactive media outreach, responsiveness to media inquiries, concentrated efforts to build awareness around the fruit's seasonality and the celebration of the 10th anniversary of California Avocado Month.

As part of its efforts to build excitement around peak California avocado season, the Commission demonstrated the fruit's versatility by piquing consumer interest in on-trend charcuterie boards. To showcase the start of the season, CAC distributed a press release and mat release announcing its partnership with Los Angeles-based food stylist and charcuterie board expert Meg Quinn. Both releases included Quinn's two charcuterie board recipes and three dip recipes, all starring California avocados.



Regional publication Arcadia News was one of many publications to pick up the California Avocado Month mat release.



To celebrate California Avocado Month, partner Chef Nyeshia Arrington's California avocado recipes were featured on Yahoo! Life alongside her interview.



**Your trusted
partner in all
things Avocado.**



805-650-1040 | www.freskaproduce.com

To celebrate the milestone anniversary of California Avocado Month, CAC distributed a press release and mat release promoting two new California avocado recipes developed by partner chef Nyeshya Arrington. As part of its proactive media outreach efforts, the Commission routinely leverages its chef partners to serve as spokespeople for media interviews. Thus, as part of the 10th anniversary celebrations, the Commission secured a media interview for Chef Arrington with Yahoo! Life where she discussed her partnership with the Commission, California Avocado Month and her favorite California avocado recipes and tips.

To position itself as an industry expert and reinforce messaging that California avocados are the premium choice, the Commission also responded and contributed to media stories—including those that examined the avocado shortage and Mexican avocado ban.

Foodservice public relations

Foodservice publications not only report facts but are considered media influencers in terms of trends and ideas, therefore by showcasing California avocados the Commission can encourage restaurants – ranging from independents to chains – to incorporate the seasonal fruit into their dishes. To inspire menu innovation, the Commission leveraged industry leaders and influencers to promote California avocado growers and their fresh, premium fruit in media pieces focused on local produce, California, and California style and cuisine. To reach a diverse audience, CAC concentrated its PR efforts on foodservice print and digital magazines and the publications’ newsletters and similar digital formats. From November 2021 through July 2022, more than 3.2 million impressions were garnered via the foodservice PR program.



The Avocado and Egg Wheat Berry Toast Nosh Box recipe was used in the Commission’s foodservice PR program.

Sharing a chef’s recipe for an item that is on an establishment’s menu is a powerful means of demonstrating to readers (including chefs and restaurant operators) that California avocados can successfully be added to any dish. Therefore, throughout the year the Commission’s foodservice team researches chefs and restaurants in targeted markets to discover who is featuring innovative dishes with fresh California avocados on seasonal menus. The team seeks unique menu items that go beyond salads, cold sandwiches and burgers – like hummus with avocados, grilled cheese sandwiches topped with avocado slices, avocado corn dogs, a cauliflower ceviche with avocado and so on.

To help spread the message about how California avocados add value to classic and on-trend dishes, the Commission then contacts the selected chef to request permission to share their recipes and credit them with the unique menu presentations. The recipe is then tested and photos of the prepared dish are taken in studio. The carefully selected recipe and photo, along with the name of the chef and restaurant, are then pitched to a publication when there is an opportunity to support the article with the operator’s successful California avocado menu item.

In many cases, a publication runs a digital slide show of dishes to accompany a topic, so CAC’s foodservice team offers photos from the Commission’s foodservice recipe collection that suit the article’s theme. For example, if a story or slide show is showcasing to-go lunch specials or plant-forward entrees, the team would offer recipes such as the California Avocado and Miso Ginger Soba Noodles or California Avocado and Egg Wheat Berry Toast Nosh Box.

The team also proactively pitches content ideas that



National Culinary Review’s two-page article about growing and harvesting California avocados featured grower Rachel Laenen.



The Commission showcased the California Avocado and Miso Ginger Soba Noodles recipe to inspire operators in its foodservice outreach.

expand the editor’s initial storyline and support the Commission’s strategies. As an example, if a publication is publishing an article on Mediterranean cuisine the Commission would share the *California Avocado Hummus* recipe and chef contact with the editor. As a result, the editor now has the opportunity to supplement the article with a complementary signature dish and the chef can share with readers how they utilize local produce, such as California avocados, to put a unique twist on menu items.

Another current foodservice trend is to write about where produce on the menu is grown. To meet that demand, CAC’s foodservice team set up media interviews with California avocado growers to bring their story to life. In some cases, their stories were featured as a sidebar article to draw additional interest.

Retail and industry public relations

For the retail and industry audiences, the Commission focuses its public relations efforts on topics of specific interest to these groups — for example, information concerning the California avocado crop, CAC advertising and promotions, California avocado growers, and Commission activities and news. From November 2021 through July 2022, the Commission generated more than 7.7 million impressions from coverage in retail, produce and agriculture-related print and digital newspapers, magazine, newsletters and podcasts.

The Commission proactively created and distributed press

California Avocado Commission Reveals 2022 Pre-Season Forecast; Jan DeLyser Discusses

IRVINE, CA - Demand for California avocados continues to grow, especially as the planning of Super Bowl snack spreads commence, and the California Avocado Commission has revealed that the category is gearing up for even more growth. The commission's 2022 pre-season forecast for California avocados projects a nearly 15 percent increase over the last fiscal year, **predicting a 306-million-pound crop.**

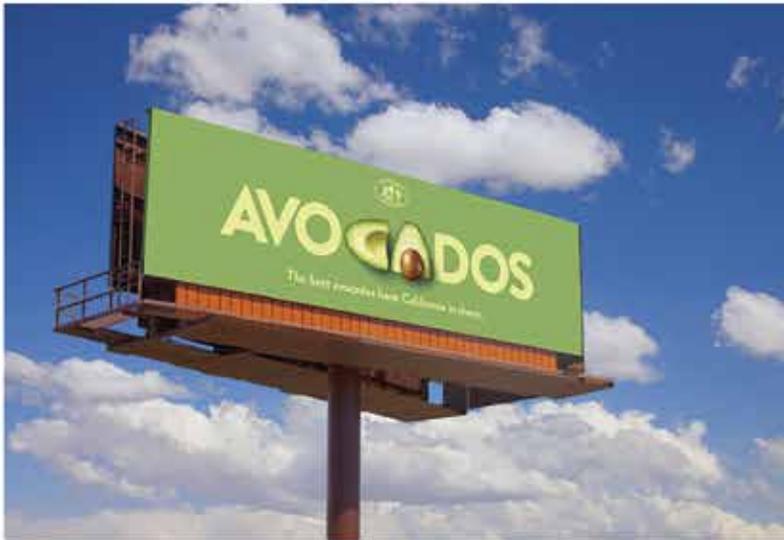
"California avocado growers welcomed rains in December and January because they moved the region from severe drought to moderate drought conditions, and rain usually has a positive impact on tree health and avocado sizing," said Jan DeLyser, Vice President of Marketing. "We're expecting a good mix of sizes to support a variety of customer needs."

An excerpt from one of the retail PR stories. Article published by AndNowUKnow.

supermarket

PERIMETER®

California Avocado Commission details marketing plans



04.19.2022 By Andy Nelson



IRVINE, CALIF. – The California Avocado Commission is extending its successful advertising campaign, “The best avocados have California in them.”

This season’s ads feature visuals that point to the “CA” in the middle of the word “avocados,” and audio and other ads that call out the play on words in their taglines. Consumer media is targeted to avocado shoppers in California and the West who are willing to pay more for premium brands and to avocado “super-users,” “mega-users” and “ultra-users.”

“Consumer research has shown that the campaign is very effective at building awareness for the California avocado season and maintaining brand preference among targeted consumers,” said Jan DeLyser, the commission’s vice president of marketing.

This season’s consumer media began in March and continues through August. Customer-specific programs run throughout the season and will continue as the season winds down.

Social media and search advertising will continue to run year-round to maintain brand awareness and consumer engagement. Using a creative mix of advertising vehicles, the California avocado media plan will achieve more than 257 million impressions this season.

The California avocado ads are being shown on video streaming via channels such as Hulu and YouTube and services such as Tremor video. Audio advertising on iHeart radio, Spotify and Pandora also features visual components. Digital advertising using services such as GUMGUM reaches CAC’s targeted consumers, as does custom content on providers such as The Kitchn and Food52.

The commission is also utilizing the mobile directions app Waze to direct avocado shoppers to retail store locations on their routes where California avocados are in distribution.

Outdoor advertising in California from May through July will feature billboards and wallboards in Los Angeles, Orange County, San Diego and San Francisco, and 155 Volta charging stations in high-traffic locations, including some in the parking lots of supermarkets that merchandise California avocados, will remind shoppers on their way in to stores to add the fruit to their shopping carts.

Social media marketing continues on CAC’s Facebook, Instagram, Pinterest and YouTube channels, and to reach younger avocado shoppers CAC now has a presence on TikTok. The Commission’s influencer marketing program, which works with influential content creators, recipe developers and dietitians, complements the California avocado creative media plan and social outreach.

releases for the trade media audience on a variety of topics. Some of those included announcements that built anticipation for the California avocado season; updates concerning crop projections and harvest timings; and information about the Commission and its staff. In addition, CAC shared news about key consumer programs to demonstrate how the Commission provides support for the product. Topics included the consumer advertising program, the 10th anniversary of California Avocado Month and CAC’s social media program.

A key part of the Commission’s retail and industry PR program involved editors’ and writers’ interviews with Jan DeLyser. This year articles showcased Cinco de Mayo, Fourth of July, avocado bag sales, locally grown programs and seasonal marketing. Some of the articles featured California avocados exclusively and others were “round-up” articles including information from multiple sources. The Commission also provided publications with topical images to extend California avocado coverage. It is worth noting most publications greatly appreciated photos of California avocado growers in their groves.

In both press releases and interviews, the Commission also wove in information that differentiates California avocados from those of other origins, subtly reinforcing advertising messages and CAC’s retail marketing directors’ efforts to position the fruit as the premium choice.

To round out its retail and industry PR efforts, the Commission also invited representatives of select publications to in-person events where they could speak directly with CAC staff, growers and chef partners. This season trade publication members participated in CAC’s virtual cooking class and grove open house, resulting in significant press coverage that built interest in the California Avocados brand. 🥑

A CAC press release adapted by a retail trade publication described the Commission’s consumer marketing plans and featured California avocado outdoor advertising. Reprint courtesy of Supermarket Perimeter.



THE FAMILY NAME IN CALIFORNIA AVOCADOS SINCE 1944
JOIN THE McDANIEL FAMILY OF GROWERS IN 2022

www.McDANIELAVOCADO.COM

(760) 728-8438

INFO@McDANIELAVOCADO.COM

965 E MISSION RD - FALLBROOK, CA



California Avocado Sashimi Board

Brand Advocates Continue to Generate Awareness and Educate Consumers About California Avocados

During the 2022 California avocado season, the California Avocado Commission partnered with five food- and recipe-focused bloggers and content creators to continue to expand California avocado brand awareness and affinity. These brand advocates educated targeted audiences about the availability and premium quality of the fruit and created recipes to inspire them with different ways to enjoy the fruit in season.

By leveraging third-party partners with significant social followings, the Commission was able to expand its reach to an expanded audience of targeted consumers via the advocates' various social media platforms. Each of the California avocado brand advocates are well-known and trusted influencers with excellent food styling skills and the ability to masterfully create delicious recipes.

The five brand advocates for the 2022 season were:
Adam Merrin and Ryan Alvarez of Husbands That Cook
Ashley Hankins of Eat Figs, Not Pigs
Hannah Kling of Lovely Delites
Kristina Cho of Eat Cho Food
Remy Park of Veggiekins

The Commission provided the brand advocates with recipe themes that would appeal to consumers, are easy to make and easily replicated in average home kitchens and that would also challenge the culinary creativity of the partners. Designed to grab consumer attention, these themes included Time Saver Meal/Take-Out at Home, Charcuterie Board, Date Night and Boardwalk Bites. For example, Kristina Cho of Eat Cho Food created the fresh and visually appealing *California Avocado Sashimi Board*. The board was composed of fresh sushi-grade fish, artfully sliced California avocado, crispy rice balls



California Avocado Pesto Pizza

(yaki onigiri), seaweed snacks, edamame, cucumbers and a California avocado-edamame dipping sauce — a unique spin on a charcuterie board. Ashley Hankins of Eat Figs, Not Pigs artfully constructed a *Springtime Charcuterie Board featuring California Avocados* that included crackers, seasonal fruits and veggies, California avocado hummus, vegan avocado ranch dressing and fresh slices of avocado. Hankins also crafted a *California Avocado Pesto Pizza* for May's date-night theme.

To encourage California avocado demand, the Commission worked with the brand advocates to craft social media posts encouraging their followers to look for and purchase California avocados while they are in season and at their peak availability. Additionally, all of the third-party social media content tagged the Commission's social handles, providing the Commission with the oppor-

tunity to direct followers to CaliforniaAvocado.com.

Throughout the season, the brand advocates photographed their recipes and created short form videos that communicated their preference for California avocados. They encouraged their followers to look for the California label when shopping for avocados at their local supermarkets. The content created by these trusted third-party influencers captivated audiences, generated high engagement and brought attention to California avocados. The content was posted on each advocate's blog and shared across their individual social media channels,

including Instagram, Facebook, Pinterest and the ever-trendy TikTok. From March to June, the Commission's brand advocates garnered more than 2 million impressions across their blogs and social channels. 🥑



Springtime Charcuterie Board featuring California Avocados

The Many Facets of the GEM Avocado

By Tim Spann, PhD
Spann Ag Research & Consulting, LLC

The GEM avocado has been receiving tremendous attention from growers in California over the past few years, with the 2021-2022 crop likely to exceed 5 million pounds. The variety — named for former UC Riverside staff researcher Gray E. Martin — originated from a block of Gwen variety seedlings that were planted in Ventura County in 1985. After its selection by Gray, budwood of the variety was grafted onto trees at South Coast Research and Extension Center in Irvine in 1992. The variety was patented on March 14, 2002, and as of March 14, 2022, the patent is expired.

GEM trees are typically described as upright and compact. Compared to Hass trees, GEM trees have more dense foliage, are less alternate bearing, and the fruit tend to be larger. The GEM tree tends to hold its fruit more internally than Hass; thus, the GEM fruit are less susceptible to sunburn. Anecdotal data also suggest the variety is slightly more heat and cold tolerant than Hass. GEM trees also are precocious, flowering and fruiting sooner after planting than Hass trees, often producing a commercially harvestable crop in the second year after planting.

Despite these positive characteristics, growers have been slow to adopt the variety and it wasn't until the 2019-2020 crop year that the California GEM crop topped 1 million pounds. Thus, beginning in the 2020-2021 crop year, the California Avocado Commission began to track GEM statistics separately from other varieties as it does for Hass and Lamb Hass. This article will attempt to comprehensively review the GEM variety, including potential economic returns, using data compiled from a variety of sources in California.



Gray E. Martin with his namesake tree, the GEM avocado, in a grove in Temecula, California, June 2021.



POTASSIUM EFFICIENCY

Replace high volume potassium inputs with a more efficient potassium product, Rx Platinum™ (1-7-12). Rx Platinum™ is a phosphorus and potassium fertilizer that contains proprietary soluble carbon compounds. Rx Platinum™ reduces abiotic stress, improves root growth, and increases soil microbial diversity due to humic, fulvic, and long-chain soluble carbon content. Rx Platinum™ utilizes technology from its proprietary formulations of diKaP™, Rootex™, and H-85™. [Learn more...](#)



Rx Platinum™

IMPROVES ROOT GROWTH & MICROBIAL DIVERSITY

- ✓ Improves soil phosphorus and potassium availability
- ✓ Improves microbial diversity with short-, medium-, and long-chain carbon compounds

Contact us for more information: (208) 678-2610

   @redoxgrows [redoxgrows.com](https://www.redoxgrows.com)

Grab your phone



Open up the Camera or Google Lens



Scan the code



Cultural Management

The GEM avocado is a much more compact tree than Hass and tends to grow more upright, almost columnar, rather than spreading like Hass. Many growers who have planted GEMs have found that side pruning is virtually unnecessary. Further, topping to maintain overall tree height doesn't need to begin until about year eight after planting and then tree height usually can be maintained by clipping a single branch in the top of the tree each year. The variety lends itself well to maintaining a tree height of about 10 to 12 feet, which eliminates the need for ladders in the grove.

Given the GEM's growth habit, it lends itself to high density planting. Some growers have planted GEM trees as close as five to six feet between trees and eight feet between rows. Despite the tree's upright habit, the author's opinion is that these spacings are too narrow. Plantings in the range of eight feet between trees and 12 to 14 feet between rows is probably close to ideal for this variety. This equates to a tree density of about 380 to 450 trees per acre. Between-tree spacings greater than 8 feet tend to result in plantings with excessive space remaining between trees for many years, space that could be producing fruit.

Despite the GEM's smaller stature, it is a hungry tree. Growers who have planted GEMs and fertilized them as if they were Hass have not been happy with their performance. No specific studies have been conducted to determine the optimal leaf nutrient levels for GEM, but based on their experience Brokaw Nursery believes the optimum leaf nitrogen level is likely close to 3%, compared to 2.2-2.5% for Hass (<https://www.californiaavocadogrowers.com/articles/gem-observations-and-recommendations-brokaw-nursery>).

In addition, GEM trees have more dense foliage than Hass, which, when coupled with the higher densities they are planted at, likely results in higher water needs in addition to more fertilizer. The growth habit of the trees, columnar with dense almost weeping branches, also makes using microsprinklers questionable. Because of their growth habit, it is not feasible to skirt prune GEM trees to allow microsprinklers to reach under the canopy without removing a significant amount of the canopy and, thus, fruiting potential. Therefore, drip irrigation may be more suitable for GEM trees — an irrigation system that most avocado growers are not familiar with. With their low hanging branches and fruit, growers using microsprinklers with GEM trees may experience a higher proportion of downgraded or even cull fruit due to the fruit being wet from irrigation.

Flowering and Fruiting

The GEM avocado is an "A" flower type — opening as female in the morning of the first day and male the afternoon of the second day. Thus, if growers are interested in plant-

ing a pollinizer variety a "B" flower type is needed. However, given GEM's unique shape and growth habit, most available "B" flower type trees do not pair well with it. The University of California variety "BL-516" (frequently called "Marvel") was originally selected by Gray Martin to be a pollinizer for GEM since it has a similar growth habit but has not yet been released by the University (see page 10 in this issue of *From the Grove*).

It is not uncommon for GEM trees to flower extremely heavily when young, which can cause defoliation. Growers should be aware of this trait and carefully watch their trees the first couple of years after planting and be prepared to white-wash the trees to prevent sunburn if they defoliate. If possible, it's best to not let the young trees carry too much fruit in the first year or two, which can hinder the trees' growth and establishment. Young trees also need to be securely staked to help them support the crop load and prevent tree damage or death from limb breakage in high winds.

GEM fruit tend to set in small clusters. As the fruit grow, their weight pulls the fruiting branch down and into the canopy so fruit are well protected from sunburn. It is not uncommon to walk up to a GEM tree and see absolutely no fruit, only to discover that when a branch is pulled aside the tree is loaded with fruit, all safely hidden inside the canopy. This habit is likely why, at least in part, growers have observed that GEM trees are more heat and cold tolerant than Hass.

GEM fruit are larger than Hass. In the patent for GEM, the average GEM fruit size was reported as 235 grams (8.28 ounces) compared with Hass at 204 grams (7.19 ounces). Overall, growers can expect to see the size curve shift one to two sizes larger for GEM fruit than they usually see for Hass fruit. It is common for young GEM trees to produce very large fruit, but this usually goes away by year three.

Wind Scarring

Many GEM growers have reported high levels of wind scarring on the fruit in their young trees. There was some debate that the scarring being observed was the result of a greater susceptibility to avocado thrips, but this was put to rest with a CAC-funded study in 2020 (see "GEM Avocado Fruit Scarring: Causes and Preventive Measures" Spring 2021 *From the Grove*).

Because GEM fruit tend to set in small clusters, the very young fruit (pea to marble size) can rub against each other or against limbs and leaves in high wind areas and develop scars. As the fruit enlarge, these scars are stretched and become larger, sometimes covering a significant portion of the fruit's surface. This appears only to be an issue in young trees in areas with high spring winds and seems to diminish as the trees mature.

Fruit Production

Few replicated trials have been conducted doing a side-by-side comparison of GEM and Hass production. Figure 1 shows data from six trial sites comparing GEM yields to Hass yields. Five of these trials – Oxnard, Arroyo Grande, Santa Paula #1, De Luz and Irvine – were conducted by Dr. Mary Lu Arpaia. The trees in these five trials were all top worked to GEM following stumping of older trees on seedling, Duke 7 or Toro Canyon rootstocks, and were at relatively wide spacings (approximately 20' x 20'). Yield data was collected once the trees came back into production following top working. There were five to 16 trees from which data was collected across the five sites. The sixth trial, Santa Paula #2, was planted by Brokaw Nursery from new nursery trees. There were 51 GEM trees on Toro Canyon rootstock, and 196 Hass trees on a combination of Toro Canyon and Dusa rootstocks planted at approximately 6' x 14'.

The shortest of these six trials lasted four years (Oxnard) and the longest went for seven years (Irvine and Santa Paula #2). In all these trials, the GEM trees outperformed the Hass trees, measured as pounds of fruit per tree, over the duration of each trial. Although within a given year – for example, 2009 Santa Paula #2, 2001 Irvine – the Hass trees sometimes outperformed the GEM trees. The greatest yield difference was found at Santa Paula #1, where over the five years of data collection the GEM trees produced 326 pounds more than the Hass trees. The smallest yield difference was at Arroyo Grande where the GEM trees produced only 47 pounds more than the Hass trees over five years. Averaged across all six locations and years, the GEM trees yielded 55% more fruit compared to the Hass trees.

Although there is anecdotal

data suggesting the GEM variety is more cold and heat tolerant than Hass, it is notable that the two trial locations with the lowest yields – Arroyo Grande and De Luz – are also, on average, likely the coolest and hottest locations, respectively. That said, the Hass trees were similarly low yielding at both locations and GEM did outperform the Hass trees at both locations. This is by no means definitive data, but growers should be aware that GEM is still a new enough variety that a lot of questions remain unanswered.

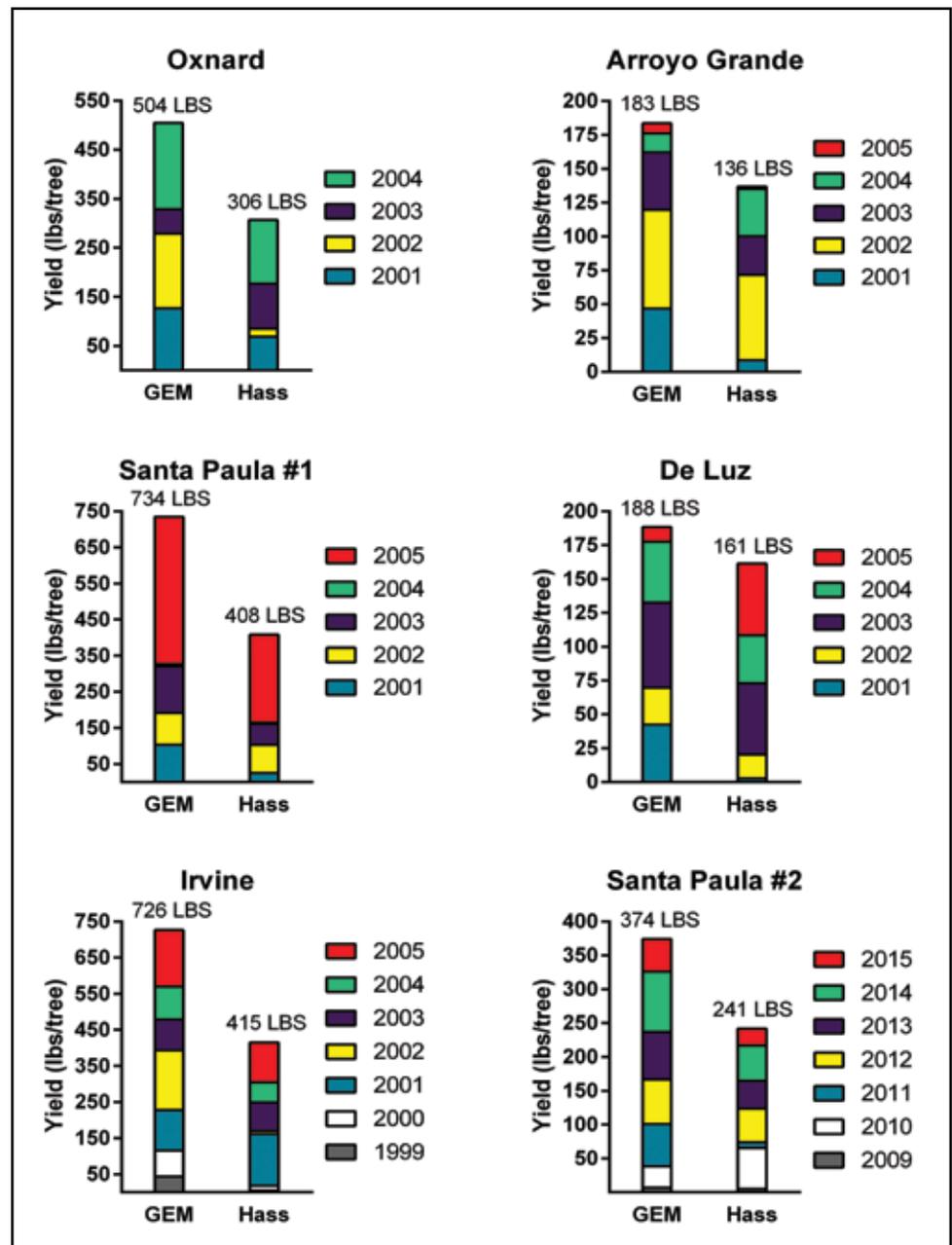


Figure 1. The yield data from six trial sites where GEM and Hass avocados were planted side-by-side. At all sites except Santa Paula #2, the GEM and Hass varieties were top worked onto stumped trees and were at relatively wide spacing. At Santa Paula #2, the trees were all planted from new nursery trees at a spacing of approximately 6' x 14'. Data courtesy of Dr. Mary Lu Arpaia, University of California Riverside, and Rob Brokaw, Brokaw Nursery.

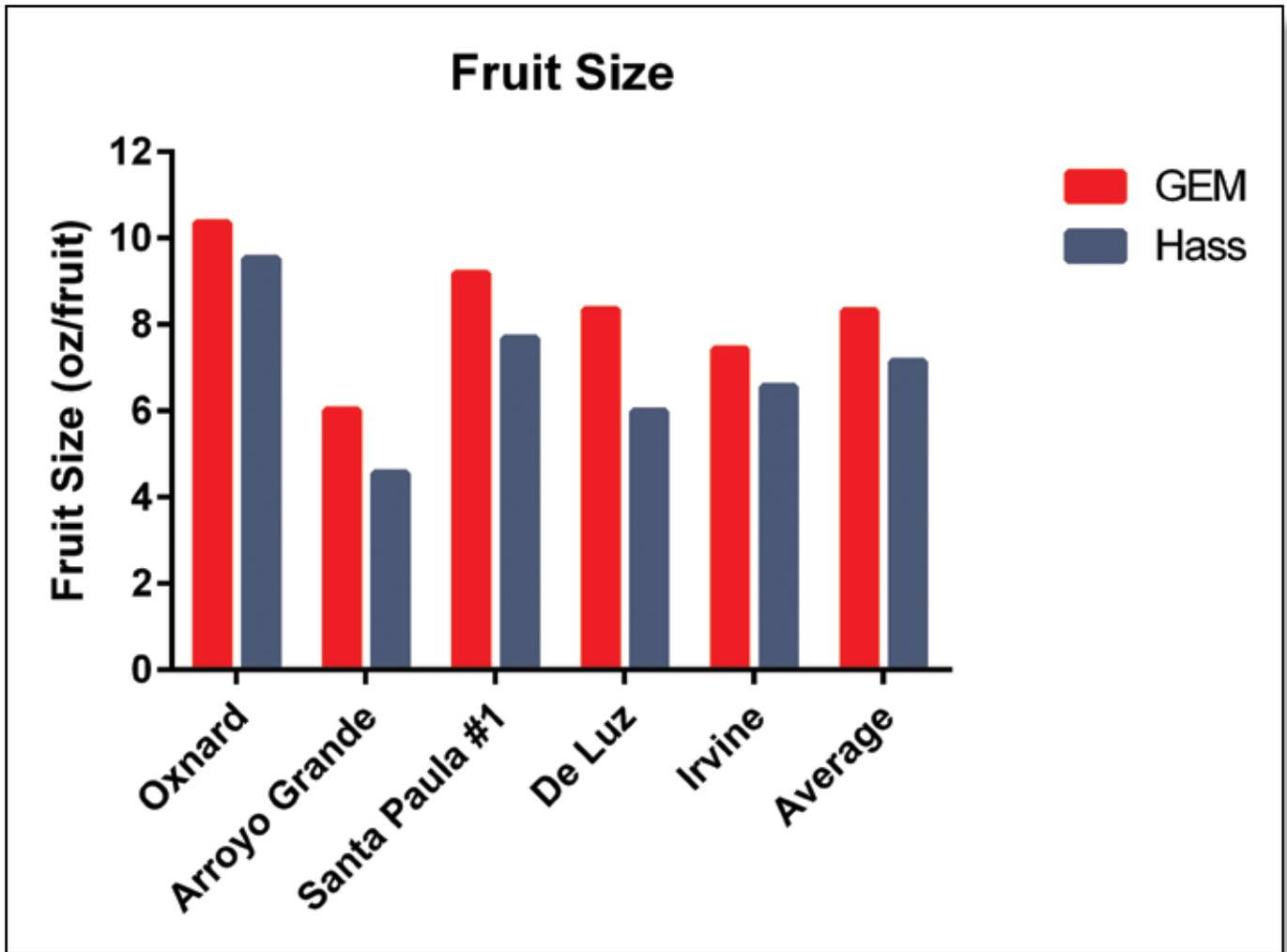


Figure 2. The average size (ounces per fruit) of fruit harvested from GEM and Hass trees at five of the six sites for which yield data are presented in Figure 1. Data courtesy of Dr. Mary Lu Arpaia, University of California Riverside.

At five of the six trial sites shown in Figure 1, additional data on individual fruit size and alternate bearing was collected. Figure 2 shows the average fruit size for GEM and Hass fruit across the duration of the trials (four to seven years) at each site, as well as the overall average across all sites and years. GEM fruit were consistently larger than Hass fruit, as claimed in the GEM patent. The largest fruit for both GEM and Hass came from the Oxnard trial site, while the smallest fruit were from the Arroyo Grande site. Overall, GEM fruit averaged 8.3 ounces (size 48) and Hass fruit averaged 7.1 ounces (size 60) across all sites and years.

Alternate bearing is measured as a ratio of yield in one season compared to yield the next season. An alternate bearing index of 1 equates to perfect alternate bearing – crop, no crop, crop, no crop – whereas an ABI of 0 indicates no alternate bearing (equal crop every year). Across all trial sites and years, GEM trees averaged an ABI of 0.55, whereas Hass trees had an average ABI of 0.77. The ABI of GEM trees

ranged from 0.43 (Arroyo Grande) to 0.70 (Santa Paula #1). The ABI of Hass ranged from 0.65 (Oxnard) to 0.89 (De Luz). Overall, these data support the observation that GEM tends to be less alternate bearing than Hass, although under some conditions GEM can alternate bear at a similar level to Hass (e.g., Santa Paula #1).

GEM vs. Hass Prices

As stated earlier, CAC only began tracking GEM independently from other varieties in the 2020–21 crop year (Nov. 2020 – Oct. 2021). Thus, average returns data is limited. For the purposes of this article, several handlers anonymously shared their payout data for Hass and GEM fruit for the 2020–21 and 2021–22 seasons. Across these two seasons, GEM fruit ranged from \$0.89 per pound to \$2.08 per pound, whereas Hass fruit ranged from \$0.94 per pound to \$1.94 per pound. Overall, CAC data indicate an average GEM price of \$1.20 per pound in the 2020–21 season and \$1.70 per

pound for the 2021–22 season to date. Hass price data averaged \$1.22 per pound for the 2020–21 season and \$1.70 for the 2021–22 season to date. CAC-compiled data, which are based on reporting from all AMRIC handlers, can be found at <https://www.californiaavocadogrowers.com/industry/pounds-and-dollars-variety>. (AMRIC – Avocado Marketing and Research Information Center – handlers are defined as those handlers who handled a minimum of 1% of the previous years’ total California avocado crop volume.)

Based on the available data, it is hard to argue that GEM or Hass fruit are generally more profitable simply from a price per pound perspective. There were certainly times across the two seasons for which data are available that GEM fruit were securing a higher price than Hass (\$0.68 greatest difference). However, the opposite also is true and there were times when Hass fruit were securing a higher price than GEM fruit (\$0.29 greatest difference). But again, based on AMRIC data, there is essentially no difference in the average price per

pound for the two varieties (\$1.20 vs \$1.22 in 2020-21; \$1.70 vs \$1.70 in 2021-22).

GEM vs Hass Profitability

The fundamental question that many growers are asking is: “Is it profitable to plant GEMs?” This is a difficult question to answer given the rather limited data set available and how diverse the California avocado growing region is in terms of climate, water quality and water availability. The accompanying table attempts to summarize the costs and returns associated with GEM compared to Hass.

To create this table, several assumptions were made and those will be discussed here. A general underlying assumption is that we are comparing replanting the same piece of ground, just doing so with either Hass or GEM. That means we are not comparing GEM trees growing on flat ground in Ventura to Hass on a steep slope in Temecula, and we’re not comparing well water to district water.

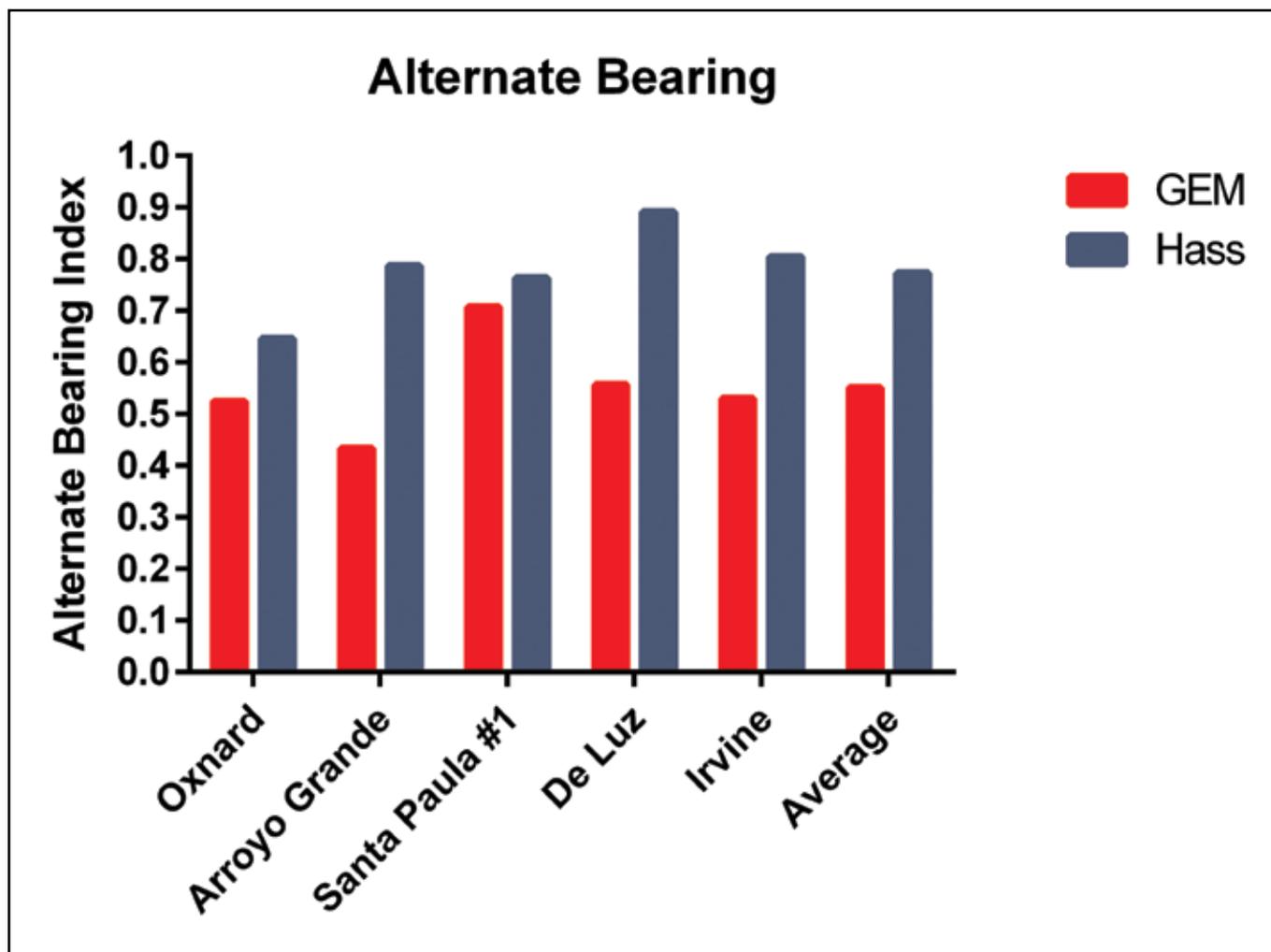


Figure 3. The alternate bearing index for GEM and Hass trees at five of the six sites for which yield data are presented in Figure 1. Data courtesy of Dr. Mary Lu Arpaia, University of California Riverside.

The relative costs and returns for GEM avocados compared with Hass avocados grown in California based on data presented in the accompanying article. For purposes of this comparison, a GEM planting spaced at 8' x 14' was assumed (450 trees per acre) and compared to a Hass planting spaced at 15' x 15' (190 trees per acre). See article text for details on assumptions that were made to compose this analysis.

Cost/Return	Years 1-5	Years >6
Tree Costs	240% ↑	N/A
Planting Costs	240% ↑	N/A
Water Costs	240% ↑	25% ↑
Fertilizer	20% ↑	20% ↑
Pruning	=	80% ↓
Pest Control	=	=
Harvesting	=	20% ↓
Yield	55% ↑	55% ↑
Downgrade/Cull fruit	5-10% ↑	=
Price per pound	=	=

Tree spacing is a major assumption that needs discussion. It is the author's opinion that for the most part the idea of planting Hass trees at high density (10' x 10' or closer) has been well established to be too time- and pruning-intensive for the average grower to manage effectively. Thus, for the purposes of this comparison a Hass planting at 15' x 15' was used as the "modern" standard planting density. Similarly, since there is not an industry-wide accepted planting density for GEM trees, the author's opinion of an ideal GEM spacing of 8' x 14' was used. These two spacings result in a density of approximately 190 trees per acre for Hass and 450 trees per acre for GEM, assuming a solid planted acre with no grove roads or other unplanted areas. This is a 2.4x (240%) increase in trees per acre for GEM vs Hass, thus the initial tree cost is 2.4x higher for GEM than Hass, assuming both varieties sell at the same price.

Another assumption made was that these trees were being planted in a replant situation, thus irrigation mains are already installed, and no major underground pipe work is needed. Therefore, the planting cost — planting the tree, staking the tree, above ground irrigation parts — were assumed to equal the tree cost. As a result, planting costs are 2.4x higher for GEM compared with Hass.

During the early years of grove establishment, most grow-

ers use drippers or some form of deflector on microsprinklers to focus water on each individual tree. Thus, early in the life of a grove the water cost is directly proportional to the number of trees per acre. In this case, this would be 2.4x greater for GEM than Hass. However, once trees begin to close canopy, their water use is more correlated with canopy volume per acre than the number of trees per acre. However, we know that GEM is a thirstier tree than Hass, although we do not have solid data to say exactly how much thirstier it is. Therefore, assuming the higher tree density results in somewhat greater canopy volume per acre, plus the greater thirst of GEM, the water use in year 6 and beyond is assumed to be 25% greater for GEM than Hass.

We know that GEMs have a higher fertilizer need than Hass as they do for water, but no data is available to determine exactly how much more is needed. For this discussion, the higher fertilizer demand of GEM was assumed to be a modest 20%.

Neither Hass nor GEM trees will require any pruning in the first years after planting, aside from maybe some sucker removal, thus the cost of pruning for both varieties is equal for years 1-5. Beginning in year 6, Hass planted at 15' x 15' will begin to touch and some pruning will start to be required on a routine basis. As mentioned earlier, the GEM trees will not require any pruning until they begin to need some topping for

height control. Thus, the pruning costs of GEM are assumed to be 80% less than for Hass in year 6 and beyond.

There are no known pest issues with GEM beyond what is normally dealt with in Hass — Persea mite and avocado thrips — nor are they known to be any more resistant to these pests than Hass. Thus, pest control costs are assumed to be equal.

Harvesting is a tricky area to discuss. For this article, the author spoke with several grove managers and labor contractors to better understand harvesting costs. Essentially, harvesting costs are on a per pound basis, period. The need for ladders to harvest will drive up harvesting costs. Steep slopes that slow harvesters down will drive up harvesting costs. Therefore, in the early years when trees are small and crop load is light harvesters can move quickly from tree to tree and harvesting costs are probably equivalent regardless of variety. Since we presumed a “modern” Hass spacing and management, the trees will likely be kept short enough to avoid ladder work so that will not affect harvesting costs as the trees mature. Likewise, we’re assuming the same ground so any aspect or physical feature of the terrain that will affect harvesting costs will affect Hass and GEM similarly. That said, GEMs produce more fruit per tree and the trees are spaced more closely. This results in some efficiency of harvest due to less movement in the harvesting process, which should translate to faster picking and may result in a slight harvesting cost savings. Thus, in year 6 and beyond it is assumed harvesting costs will be 20% lower for GEM than Hass.

Based on the data presented, yield of GEM is assumed to be 55% higher than Hass. In the early years, the potential wind susceptibility of GEM may be a factor for growers in wind prone areas. Thus, in the early years of the grove 5-10% more downgraded or culled fruit are assumed for GEM, but this generally diminishes as the trees age and so there is no downgrade penalty in year 6 and beyond.

Lastly, as the currently available data show, the price per pound on average for GEM and Hass fruit is equivalent.

Recognizing that everyone is expecting to see a number at this point let’s come up with one. We will assume a tree cost of \$35 for both Hass and GEM and, thus, a planting cost of \$35 per tree for a total of \$70 per tree. It follows then that our 190 Hass trees will cost \$13,300 to get in the ground and the 450 GEM trees will cost \$31,500,

a difference of \$18,200. For the sake of discussion, let’s assume everything else in our costs table balances out so we’re just dealing with needing to recover the difference in planting costs. If we assume that we get the 2021-22 average price of \$1.70 per pound for our fruit, the \$18,200 difference in planting costs equates to 10,705 pounds of fruit. In the yield data presented earlier, the greatest yield difference was at Santa Paula #1 where the GEM trees produced 326 pounds more fruit per tree cumulative over five years, or an average of 65 pounds per tree per year. The lowest yield difference in the data presented was at Arroyo Grande where the yield difference was just 47 pounds per tree cumulative over five years, or just under 10 pounds per tree per year. For our example of 490 trees per acre, this is a range of 4,230 pounds to 29,340 pounds per acre more production from GEM than Hass. Of course, the trees will take some time to grow and come into production and achieve these yield levels, but it is feasible that once the trees are producing the higher planting costs associated with GEM could be recouped in just a couple of years — that is if most of the assumptions made here are true.

So, should you plant GEM or Hass? That’s a question only you can answer for yourself. But I hope the information presented here helps you put some of the puzzle pieces together and answer that question. 🍊



BROKAW NURSERY

Premium Certified Avocado Trees on Clonal Rootstocks

Dusa®
Toro Canyon
Duke 7
Borchard
GEM™
Carmen®

BROKAW NURSERY LLC.
5501 Elizabeth Road, Ventura, CA 93004
Serving CA farmers' nursery stock needs since 1956

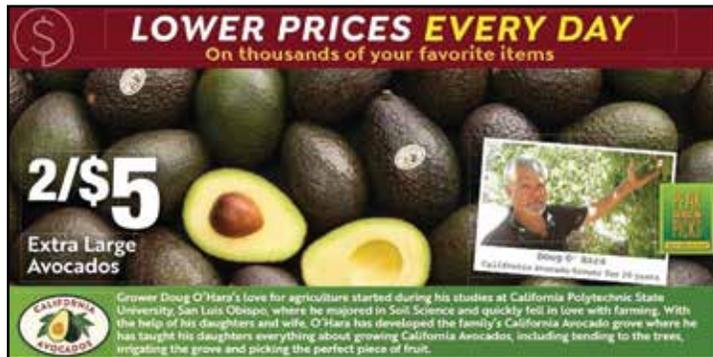
Other new commercial varieties available at
www.brokawnursery.com or call our office at 805-647-2262

California Avocado Promotions at Retail

The California Avocado Commission continues to work with loyal Tier 1 retailers to develop effective promotions and bring awareness to a broad range of consumers to increase sales of California avocados. Focusing on customers in California, the west and other targeted retailers, the California avocado-branded promotions are customized to reach the retailer's shoppers. Programs include feature advertising, promotions on the chains' social and online platforms and in-store activity. California avocado display bins and custom point-of-sale are coordinated with sales and display contests to grab the attention of shoppers, encouraging them to purchase California avocados. These programs, along with the Commission's store locator on CaliforniaAvocado.com, help build consumer awareness of the seasonal availability of California avocados and where to buy them. 🥑



Kroger – California avocado bag



Save Mart ad featuring a California avocado grower



The Fresh Market – National Avocado Day ad



Sprouts Farmers Market – California avocados ad

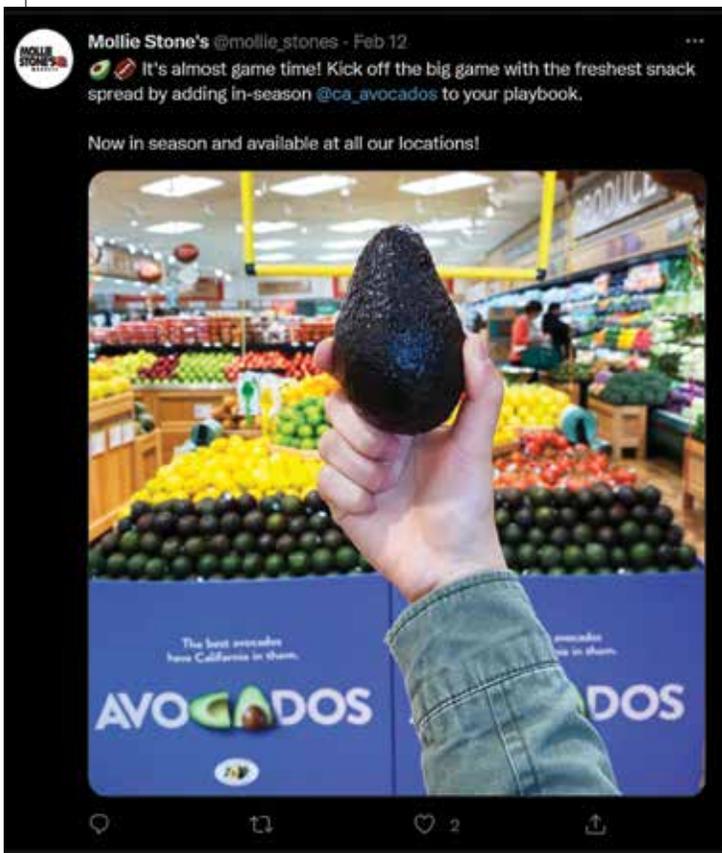


Gelson's – California avocado display (local grown promotion)

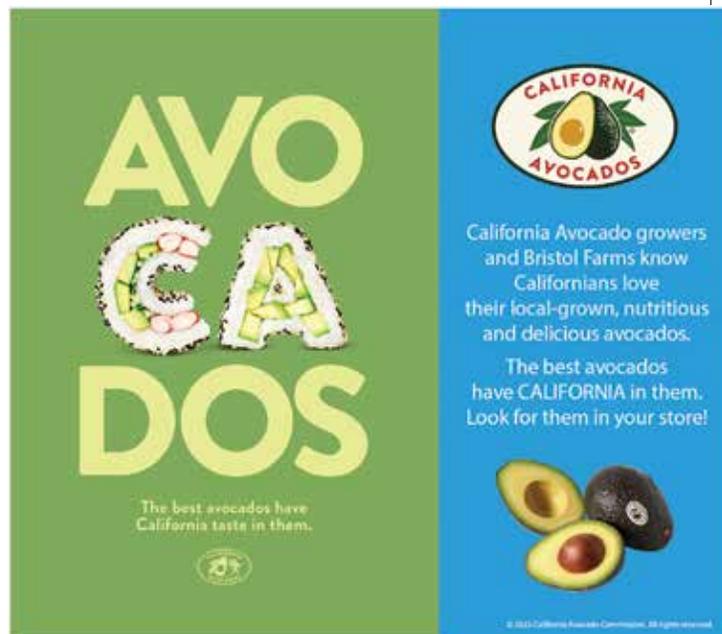
The Fresh Market – fresh made guacamole ad

Custom POS card created for New Seasons Market GEM displays

Nugget Markets' Summer Field Guide featuring GEM avocados



Mollie Stone's announcing on Twitter that California avocados were available for the Big Game



Bristol Farms – Passport to Savings ad



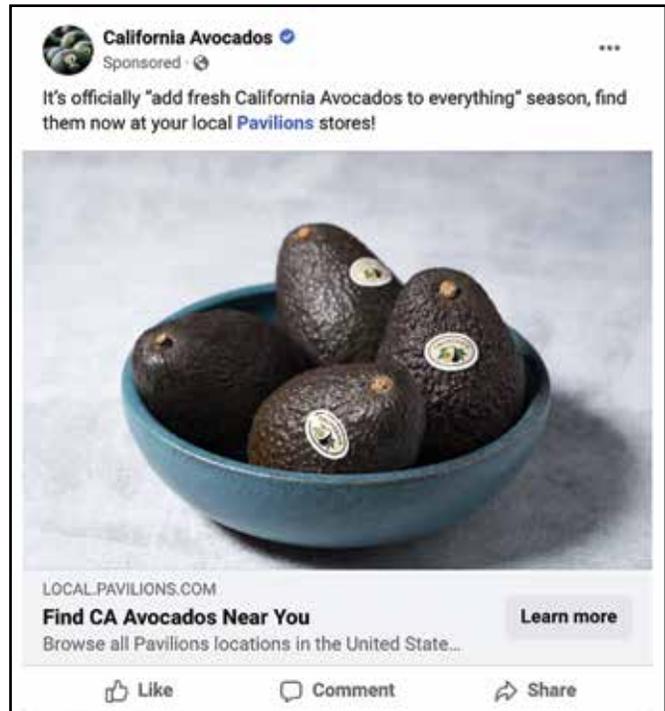
Walmart digital ad featuring California avocado campaign creative



Digital California avocado ads with Sam's Club



Mollie Stone's – California avocado display (Cinco de Mayo)



Pavilions Facebook post announcing the availability of California avocados in their stores

THINK OUTSIDE THE SKIN.



VitaFresh[™]
Botanicals

Introducing **VitaFresh**[™] Botanicals.
Our plant-based, edible coatings
preserve inner freshness.

We're taking freshness to the next level. At AgroFresh, our proprietary coatings use water retention technology to create a "double skin" membrane that reduces dehydration, maintains weight and locks in produce freshness. It's state-of-the-art science that extends shelf life and helps deliver superior eating experiences, while reflecting our Champions 12.3 commitment to reducing food loss and waste. Just what you'd expect from an AgTech innovator. That's confidence. That's AgroFresh.

Contact us to learn more about how VitaFresh can help you
extend the shelf life of your avocados at info@agrofresh.com

AgroFresh

We Grow Confidence

Contact your local AgroFresh account manager to determine availability and use in specific country and crop. © 2022 AgroFresh Solutions, Inc. All rights reserved. [™]Trademark of AgroFresh Inc.



The Pizza Factory marketing and culinary team sampling California avocado flavor pairings at FoodOvation

Showcasing California Avocados in Unique Foodservice Menu Presentations

To effectively expand foodservice decision-makers' understanding of how California avocados can be an integral ingredient in restaurant menu items — not simply a garnish or afterthought addition to a dish — the California Avocado Commission foodservice team engages with industry members at targeted in-person events. There they showcase menu items that inspire culinary creativity with targeted operators. These events also provide the Commission with the opportunity to demonstrate expertise of the product and category as well as share valuable resources and educational tools it has developed to build demand for and loyalty to the California Avocados brand.

The Commission foodservice team attends industry events throughout the year, with particular emphasis placed on spring events that highlight the onset of California avocado season. This year, for example, the Commission participated at and sponsored the National Association of Colleges and Universities Food Service Pacific/Continental Regional conference, FoodOvation and the Marketing Executive Group. At these events, the Commission's foodservice team met one-on-one with marketing, culinary and purchasing executives of chains, as well as foodservice directors and managers of colleges' and universities' foodservice outlets.

During the two-day FoodOvation event held in Sun Valley, Idaho, CAC's foodservice team met with 14 chains during 45-minute in-person sessions. The sessions began with a flavor-building exercise in which attendees tasted a slice of fresh California avocado to identify and appreciate its creamy buttery texture, mild taste and slightly nutty flavor. Next, the attendees tasted a few selected spices to discover their specific flavors. Finally, each spice was added to a slice of avocado — allowing attendees to experience how an avocado's flavor components alter the spice. The exercise demonstrated how an avocado can balance the sharpness — or enhance the subtlety — of a particular spice. In doing so, the foodservice team helped decision-makers reframe California avocados as an essential ingredient in menu items that can balance hot or spicy flavors and enhance the flavor profile of a dish. During the first day of the event attendees circulated their positive impressions of CAC's flavor building exercise via word



Representatives from Cal Poly speaking with CAC's Kim Kurata at NACUFS about collegiate menu options and California avocados

A graphic with a teal background and a decorative border of orange and red leaves. In the top right corner is the Del Rey Avocado Company logo, which features a stylized sun and the text "AVOCADO DEL REY COMPANY". In the center, the text "THANK YOU TO OUR" is in white, "California" is in a large, yellow, cursive font, and "GROWERS" is in a large, white, bold sans-serif font. Below this, it says "Wishing you all a wonderful Holiday season." in white. At the bottom center is the website "delreyavocado.com" in white. In the bottom right corner, there is a QR code and the text "Scan to see our Field Staff" in white. On the left side, there is a partial image of a sliced avocado.



CAC foodservice team member Alexei Rudolph joined Fat Shack's Albano Latifi at MEG

of mouth. As a result, the team was greeted by several chain representatives on the second day who expressed how much they were looking forward to the flavor pairing and food tasting experience.

After a two-year hiatus, both NACUFS and MEG hosted in-person events — the former in Reno, Nevada and the latter in Chicago, Illinois. At NACUFS, the Commission worked with foodservice directors, residential dining directors, chefs and dietitians from 22 colleges and universities to demonstrate how California avocados can be integrated into college students' meal plans, especially those adapted for dietary restrictions.

Prior to the National Restaurant Association expo, the Commission joined chief marketing officers and marketing managers of regional and national chains at MEG where attendees enjoyed tasting fresh California avocados in a variety of menu applications.

During both the NACUFS and MEG, most of the Commission's sampled dishes were 'sold out' during the 15-20 minute break. To showcase global flavors, the Commission served the versatile *California Avocado Neapolitan Pizza* (which is a combined pizza, flatbread and sandwich) and the Asian-inspired *California Avocado Roll Bowl*. 🥑



Chef Jason Hernandez, of the CAC foodservice team, answers questions from the Portland, Oregon based McMenamins culinary team at FoodOvation



FARMING FOR OUR FUTURE

The future comes fast. You plan, you adapt, you innovate, because that's what keeps you in business and what keeps this country fed. And we're here to help — for all the tomorrows to come.



WE ARE FARM CREDIT

A nationwide network of customer-owned associations supporting rural communities and agriculture with reliable, consistent credit and financial services.

FarmCreditAlliance.com

(855) 611-4110 toll free

American AgCredit

CoBank

Farm Credit West





GROWERS KNOW BEST.

**No one knows better than a grower what
it takes to grow an exceptional avocado.**

**That's why Index Fresh is proud to be
California grower owned for over a century.**

