

# From the **Grove**

Spring 2017

The Latest News from the California Avocado Industry

**CAC Engages Consumers  
With New Eye-Catching  
Social Media Campaign**

**Read more on page 32**







Del Rey Avocado  
has been growing  
relationships  
for 45 years

We work hand in hand with our **CONVENTIONAL** and **ORGANIC** growers, ensuring that the avocados they bring to market are of the highest quality and delicious. Give our field representatives a call today to find out how we can help bring your avocados to the next level.

Bob Siemer  
Gerardo Huerta

Jessica Hunter  
Wayne Brydon

[www.delreyavocado.com](http://www.delreyavocado.com)  
1260 South Main Avenue  
Fallbrook, CA 92028  
760-728-8325



# Grower Profile

# 20

**Simpatica**  
Camarillo, CA



## From the Grove

Volume 7, Number 1

President  
Tom Bellamore  
CA Avocado Commission

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 Manager  
949.754.0738  
aaymami@avocado.org



[www.californiaavocadogrowers.com](http://www.californiaavocadogrowers.com)

# In This Issue

Spring 2017

- 10 California Avocado Marketing Team Prepares for 2017 Season
- 14 Commission's Connie Stukenberg Takes the Helm at the FPFC
- 20 Shared Experiences Launch Simpatica Down Avocado Path  
Grower Profile
- 32 Informing, Engaging, Entertaining and Inspiring California Avocado Fans via Social Media
- 34 Commission's Food Safety Program Continues
- 36 Health Claim for Avocados Approved: HAB, CAC to Emphasize Benefits

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.

## Departments

- 4 Message from the President
- 8 Chairman's Report
- 16 From Your Commission
- 18 Issues Watch
- 24 California AvoTech
- 28 Better Growing
- 31 Handler's Report

Volume 7, Number 1

Spring 2017

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.



## All Eyes East: Part Two

Leading up to Super Bowl LI on February 5, 2017, avocados were once again in the media spotlight with guacamole continuing its reign as a party mainstay. Unlike prior years, however, press coverage about the 128 million pounds of avocados consumed around Super Bowl was not relegated to page two news. Instead, avocados claimed a place in front page headlines as an iconic example of trade between Mexico and the United States when the Trump administration announced its intention to scrap or renegotiate the North American Free Trade Agreement (NAFTA). What would a tariff on Mexican avocados mean for California avocado growers?, the press wanted to know.

Since January 20, 2017, a dizzying array of Executive Orders (EO) and memoranda has issued forth from the White House, all of which have implications for agriculture. It was widely speculated that an EO stating the administration's intent to renegotiate NAFTA would be signed during the President's first week in office, but that did not materialize. Instead, catch-phrases about the possibility of a "border adjustment tax" or "excessive tariffs" let slip during press interviews ignited speculation about the administration's next move. The President of Mexico stayed home and phone lines lit up at the Commission's offices.

On its face, a 20 percent (or high-

er) tariff on imports from Mexico might seem to be just what is needed to begin leveling the playing field for California growers whose costs of production are considerably higher than those of their counterparts in Mexico. The issue transcends avocados, however, or for that matter, agriculture. Mexico is among the top three export markets for the United States, taking \$236 billion worth of goods in 2015, some \$18 billion of which were agricultural products. Imposition of tariffs is a two-way street.

During 2009 and 2010, Mexico imposed retaliatory tariffs of between 10 and 45 percent over NAFTA trucking provisions, leading 56 Congressmen to pressure the Department of Transportation to immediately resolve the matter because the tariffs were having a devastating impact on local industries, especially agriculture.

The idea of a possible tariff is already making U.S. cotton, corn, and soybean producers nervous, and the portion of Congress that represents these industries cuts a broad swath across the U.S. heartland. Mexico is among the top three importers of U.S. cotton, which fuels a denim industry dependent upon textile mills in Mexico. Forty percent of the jeans sold in the United States are the product of this cross-border collaboration. Corn, soybean, dairy and pork producers also depend on Mexico as an export market, to the tune of \$7.3 billion annually.



*Tom Bellamore*

In the absence of a clear proposal out of Washington, it is impossible to predict impacts if Mexican avocado imports suddenly were faced with a tariff. Prior to NAFTA, the tariff on fresh avocados was 13.2 cents per kilogram, and this ratcheted down to zero by January 1, 2003. The pre-NAFTA tariff equates to about \$1.49 per 25-pound lug of avocados or 4.25 percent of a box wholesaling for \$35. The response to tariffs imposed today could take many forms, and the Asociación de Productores y Empacadores Exportadores de Aguacate de México (APEAM) has already hinted that Mexico might be inclined to divert product to other markets or absorb some or all of the additional costs to remain competitive. It is possible, too, that if faced with higher prices for Mexican avocados, retailers and restaurateurs would expect California to provide a "better deal." And then there is the inevitable cry and hue from U.S. sectors of industry who fall victim to retaliation by Mexico.

One thing is certain in the analysis – we can ill afford anything that threatens to unseat avocados from the pinnacle to which we have ascended. U.S. per capita consumption has maintained steady growth of around 10 percent annually and this, more than any other factor, has been our salvation here



# Harvest Time PRODUCE

A Division of **FRESKA** 



Meet our Field Representatives: Ernie Arana, Cell: 760.271.1708 ~ and ~ Jorge Quiroz, Cell: 760.421.1027

## Industry Dedication & Grower Sustainability

Since 1985, Harvest Time Produce has been on a mission dedicated to the California Avocado Industry and focused on our Growers' sustainability. Our knowledgeable field representatives are here to earn your trust and help build your avocado business. From walking your groves, to assessing your crop, we aim to maximize your value every season.

At Harvest Time our aim is clear - happy growers and happy customers...creating an ongoing winning partnership for the future.

*Love at First Bite*

Harvest Time Produce • 760.722.6969 • 303 Via Del Monte • Oceanside, California 92058





## Board of Directors

### District 1

Member/John Burr  
Member/Jessica Hunter  
Alternate/Ryan Rochefort

### District 2

Member/Kellen Newhouse-**Vice Chair**  
Member/ Leo McGuire  
Alternate/Ohannes Karaoghlanian

### District 3

Member/Art Bliss-**Treasurer**  
Member/ John Lamb  
Alternate/Robert Grether

### District 4

Member/Jason Cole-**Secretary**  
Member/Ed McFadden  
Alternate/Bryce Bannatyne

### District 5

Member/ Jim Swoboda  
Member/ Rick Shade-**Chairman**  
Alternate/Tyler Cobb

### Handlers

Member/Steve Taft  
Member/Gary Caloroso  
Alternate/Gary Clevenger  
  
Member/Egidio "Gene" Carbone  
Member/Robb Bertels  
Alternate/Donny Lucy

### Public Member Nina Ames

To contact a CAC representative, please visit:  
[CaliforniaAvocadoGrowers.com/Commission/your-representatives](http://CaliforniaAvocadoGrowers.com/Commission/your-representatives)

in California. A slowing of that engine or fall from grace is clearly not in our interest.

Other directives coming out of Washington bring their own measure of hope or uncertainty for California agriculture. A January 20, 2017, White House memorandum issued to all executive agencies and department heads establishing a regulation freeze has put the brakes on avocado imports from Colombia and lemons from Argentina at the U.S. Department of Agriculture (USDA), seemingly a good thing. A January 30, 2017, EO requiring agencies to identify two regulations to be revoked for each regulation proposed or finalized also seems positive. Among those drawing mixed reactions from agriculture, however, are a January 23, 2017, memorandum to the U.S. Trade Representative directing the withdrawal of the United States as a signatory to the Trans-Pacific Partnership and the January 25, 2017, EO on Border Security and Immigration Enforcement Improvements.

The latter EO directs the Secretary of Homeland Security to, among other things, "immediately take all appropriate actions to ensure detention of aliens apprehended for violations of immigration law" and "hire 5,000 additional border patrol agents." While it makes clear that priority enforcement should be directed toward detaining and deporting

those illegal aliens convicted of serious crimes, undocumented farm workers are manifestly nervous. By contrast, agriculture's agenda with respect to immigration puts legalizing the workforce as a top priority, either through H-2A program reforms or a qualified path to citizenship, and understandably so. In California alone, UC Davis estimates that 70 percent of all farm workers in the Central Valley are undocumented and an integral part of the \$35 billion specialty crop industry centered there, and USDA estimates that 22 percent of the labor used in field crops is undocumented.

There is little doubt that the new administration means business, and many see this as a refreshing change from the status quo. Now, several months along, as intentions translate into action, the picture is becoming a little clearer but the complexity of change is evident. Like the rest of you, the Commission is closely monitoring and analyzing these developments, watching for that spot to make the collective voice of the industry heard in a way that best serves your interests. As for those press calls – our answer is going to be: *Why would you want anything other than a California Avocado?* – at least until a concrete proposal surfaces. After all, it's all about controlling the topic of conversation, isn't it? 🥑



**Avocado thrips**

**Avocado leafroller**

**Orange tortrix**

**Lepidopterous larvae**



**Delegate® Insecticide.** The innovative mode of action of Delegate is broad-spectrum enough to control multiple pests, yet it maintains populations of most beneficials. Mites aren't flared, and secondary pests stay...secondary. You also get favorable pre-harvest and re-entry intervals, plus minimal personal protective equipment requirements. To learn more, talk to your PCA or visit [www.dowagro.com](http://www.dowagro.com).



**Dow AgroSciences**

*Solutions for the Growing World*

\*Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow  
Always read and follow label directions. [www.dowagro.com](http://www.dowagro.com)



## Rain Continues To Create Optimism



*Rick Shade*

It feels like just about a day and a half since I put my fingers to the keyboard to write my last column for “*From the Grove*”. As I write this column, rain is once again falling outside my office windows. Here in my little corner of paradise in Carpinteria, rains have been very nice and steady. We have not had to irrigate since just about Thanksgiving. By the time you read this near the beginning of spring, I hope we will still have not had to irrigate.

The good news for farmers around the state is that reservoirs are filling, creeks and rivers are running, and it appears that water deliveries for many will be near normal. It is unfortunate to note that Lake Cachuma, the reservoir for most of Santa Barbara County, has not yet begun to fill. Unless the lake does fill, growers in Santa Barbara County will still be facing extreme drought conditions when irrigation season begins. However, we are farmers, we are resilient and we will figure out a way to keep moving ahead.

One thing I can say for sure as chairman is that there is no shortage of meetings for me to attend. Because of the good rainfall situation, I was able to take the opportunity to attend two of the three food safety update meetings, the northern crop estimate meeting and

the California Avocado Commission (CAC) marketing committee meeting in the last couple of weeks. In my mind, the three topics actually tie together nicely.

One point that became very clear is how harvest labor and food safety certification are so closely knit. It seems one of the largest stumbling blocks to getting certified under the new, updated program is the availability of Good Harvesting Practices (GHP) certified harvest crews. Please know that here at the Commission we are working with the field staff for the handlers to urge as many labor contractors as possible to get certified. On our end, we are making materials available and will facilitate setting up training days as well. Making sure we have as many food safety-certified orchards as possible helps us maintain our premium position in the market place.

Through the dialogue at the crop estimating meetings, it became crystal clear that the California crop is going to be smaller than average in terms of overall poundage. With the plentiful winter rains we are finally receiving, I am confident the fruit is going to size up nicely. All of that being said, I cannot stress how strongly I believe that our fruit can command a great price in the

marketplace this year. In order to realize every penny's worth of value from our fruit, it is imperative that each grower communicates with and works closely with their handler to ensure an orderly flow of fruit to market. Neither under-supply nor oversupply will be helpful in maximizing our returns.

Strangely enough, the chairman of the California Avocado Commission attends the Marketing Committee as a guest. I was able to make a few comments during the public comment period, but there is just one that I think is important for you to be aware of: I challenged all of the handlers in the room to wring every penny's worth of value out of each piece of fruit that they sell. For us as California growers to survive in a short crop year, we need to maximize our income. Our fruit is too scarce and too dear to throw away to buyers who do not value California avocados.

Even though I am writing about this year, I can see trees out my window that are pushing bloom for the 2018 crop. This already makes me curious about what is to come. On that note, I will leave you with a quote from the great American philosopher Will Rogers that I read recently: “The farmer has to be an optimist or he wouldn't still be a farmer.” 🥑



# Giumarra

Feeding the world in a  
healthy way®



## Rapid Pay Top Returns Customized Harvest Strategy

### Contact Our Field Representatives

**San Diego & Riverside Counties:**

Jose Tostado (760-801-4560)

Scott Smylie (951-830-7498)

**Ventura, Santa Barbara, & San  
Luis Obispo Counties:**

Abel Galvez (805-798-7404)

Connor Huser (805-836-9659)



*Behind the scenes at a Los Angeles photo shoot, CAC's Jan DeLyser and Zac Benedict discuss photo options with photographer Julia Stotz and CAC's advertising agency.*

# California Avocado Marketing Team Prepares for the 2017 Season

**T**hroughout the winter months, as California avocado growers worked their groves and prepared for the upcoming 2017 California avocado season, the California Avocado Commission's (CAC) marketing team reviewed the previous season's marketing results and crop estimates for the upcoming season and built out the tactics of a comprehensive marketing plan that will support CAC's vision, bolster California avocados' premium position and deliver value to growers.

A critical early step in this year's process occurred when CAC Marketing Committee members met to discuss the 2016 marketing research findings and the results of the marketing campaigns. Using this data, the members then reviewed

projected crop estimates and provided input concerning the execution of CAC's 2017 marketing plans.

Having secured the input of the CAC Marketing Committee, the marketing team reviewed performance data and developed an initial list of targeted retailers and foodservice operators for its tiered-account marketing approach. The team then reviewed the list with Avocado Marketing and Research Information Center (AMRIC) handlers to ensure those customers on the list align with their sales plans and will provide the best value to growers. Once the targeted list was complete, Jan DeLyser, CAC vice president marketing, the retail merchandising directors (RMDs) and foodservice team met with handlers to review CAC's marketing plans and the scope



# Handling California Avocados

## Organic and Conventional Since 1974



Eco Farms was established in 1974 by Steve Taft and Norm Traner. Steve and Norm have always been advocates for organic farming and continue to grow organic avocado and citrus to this day. From a small packing shed to a modern fruit packing facility Eco Farms has grown to meet the demands of the marketplace while maintaining relationships with California growers.



Call or Email for a copy of  
the new Eco Farms Avocado  
Grower Handbook,  
[enola@ecofarmsusa.com](mailto:enola@ecofarmsusa.com)

# ecofarms

Tel: 800-350-4326  
[www.ecofarmsusa.com](http://www.ecofarmsusa.com)





*The McDaniel Fruit Company reviews CAC's marketing program binder with the CAC merchandising team in preparation for the upcoming California avocado season.*

and timing of customer-specific promotions.

The RMDs and CAC's foodservice team then began a series of one-on-one meetings with targeted retailers and foodservice operators to create customized promotional plans. Two useful tools for these meetings are CAC's marketing program binder and a one-page sell sheet. These resources provide retailers with information concerning the California avocado crop and showcase customizable promotion options such as point-of-sale materials and images, recipes and social media

tools that can be utilized for unique digital campaigns.

While the CAC marketing team meets with targeted retailers and foodservice vendors, CAC's agencies focus on crafting marketing and advertising materials. Building on the successful launch of the *Made of California* Campaign with the California by Nature tagline, creative from the 2016 print and outdoor advertising campaigns will be reprised for the 2017 season, and some new creative executions are being developed. Advertising materials, such as radio and digital ads that will direct



*The CAC marketing team and representatives of the Giumarra Company discuss customized promotional plans.*





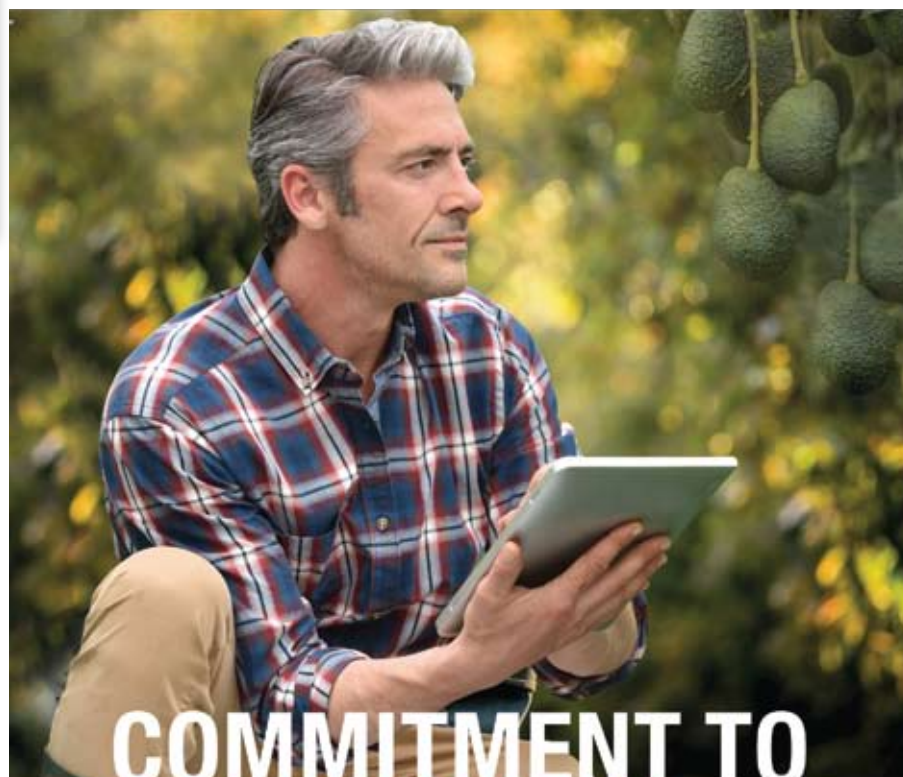
Angela Tallant, Calavo, and CAC's Connie Stukenberg outside the offices of Albertsons/Vons/Pavilions prior to discussing the timing of customer-specific promotions.

consumers to locations where California avocados are available for purchase, are in development as the marketing team works to create customized content for each audience.

CAC's social media campaigns, which have secured high rates of engagement with fans, utilize attention-grabbing and shareable images featuring California avocados in contemporary layouts. These engaging images, when shared by California avocado fans, help spread the word about the California avocado season (see Social Media article on page 32).

To build excitement about the start of the 2017 California avocado season, CAC's trade public relations (PR) team distributed a season opener press release. The first trade press release — featuring Rick Shade, the new CAC chair, and the California avocado crop estimate — garnered more than 340,000 impressions. Additionally, CAC ambassadors and influencers, such as chefs, registered dietitians and bloggers play an important role in sharing California avocado recipes and nutrition information. 🥑

CAC's marketing program binder and sell sheet showcase customizable options that targeted retailers can choose from to best suit their needs.



## COMMITMENT TO GROWERS

For over 35 years, West Pak Avocado has been committed to the California avocados industry and the growers that take pride in their craft.

From our industry leading market updates to knowledgeable cultural advice, our approach ensures enhanced performance and profitability for each of our growers. Secure, 24-hour account management through West Pak's state-of-the-art Grower Online Accounting empowers you to make quality decisions concerning harvest and market strategies.

**Maximize your returns with our market knowledge and technology.**

**1-800-266-4414** or visit us at **westpakavocado.com**.

**WESTPAK™**  
AVOCADO, INC.

# Commission's Connie Stukenberg Takes the Helm at the FPFC

**C**alifornia Avocado Commission (CAC) Retail Marketing Director Connie Stukenberg was installed as chair of the Fresh Produce and Floral Council (FPFC) at the organization's annual installation and dinner dance on January 28, 2017, in Dana Point, California.

More than 525 people attended the event, including many retailers and other industry members. Past chair Martin Quebec passed the gavel to Stukenberg, who presented the members of the FPFC apprentice program and encouraged industry involvement.

The California avocado industry also benefitted from FPFC networking opportunities at the February 23, 2017, FPFC membership luncheon in Northern California, where California avocado grower Ed McFadden participated on a panel of growers representing many different crops, including flowers, tree fruit and avocados. This activity helped promote the value of California avocados as the season started to get underway.

The FPFC provides members with opportunities to build productive relationships, access timely market information, enhance their business skills and pool their efforts to promote and advance the industry. Retailers currently serving with CAC's Stukenberg on the FPFC Board of Directors include Albertson's-Vons-Pavilions, Food 4 Less, Gelson's, Northgate Markets, Raley's and Stater Bros.

Stukenberg continues a long tradition of Commission associates who have supported the FPFC in a variety of roles, starting with one of its founding fathers, Ralph Pinkerton, along with Avi Crane, Robert Verloop and Dave Howald. CAC Vice President Marketing Jan DeLyser worked at the Council from 1979 to 1993, and in 1999 served as FPFC chair. The chair guides and counsels the FPFC president, acts as council spokesperson in conjunction with the president, presides at



*Stukenberg takes the podium as FPFC Chair.*

## The FPFC Mission

*The Fresh Produce & Floral Council is a dynamic community of professionals across all sectors of the fresh produce and floral industry who do business in California and the western region.*





*Raley's Greg Corrigan with DeLyser and Stukenberg.*

meetings and provides overall leadership for the board, keeping the focus on the FPFC mission, goals and priorities.

"Participation in, and leadership of, the FPFC provides the Commission with opportunities to work with and build personal relationships with retailers outside of day-to-day business operations," said DeLyser. "It also helps with leadership development and advances industry networking."

Stukenberg has been involved with the FPFC for more than 25 years, including three terms on the Board of Directors, and in 2012 was awarded the organization's Norman H. "Buz" Bolstad Produce Award for dedication to volunteer service and outstanding contributions to the produce industry. She spent two years on the FPFC executive committee before being elected to chair the organization.

Her produce career began more than 35 years ago, implementing fresh juice programs in stores with juice extractors during the early era of fresh juices merchandised in produce.

In 1987, she leveraged that experience to co-found Citrus Connection, a wholesale fresh juice distribution company, and built it up until it was acquired by California Day Fresh Foods, a Chiquita Brands subsidiary that later renamed the company Naked Juice. Stukenberg stayed on with Naked Juice as national sales manager. While working full-time and raising three daughters, she earned her B.S. in Business Administration and Management.

In 2000, Stukenberg joined CAC as the retail marketing director, where she managed retail marketing and merchandising programs. Almost 10 years later she independently started CS Sales and Marketing for Results, where she continued her affiliation with the Commission along with consulting for other companies within the produce industry. In 2014, she rejoined CAC staff full time as retail marketing director, assuming responsibility for CAC's core markets of Northern California, Southern California and Arizona, along with some corporate accounts. 🍌



*Gelson's John Fujii with Stukenberg.*

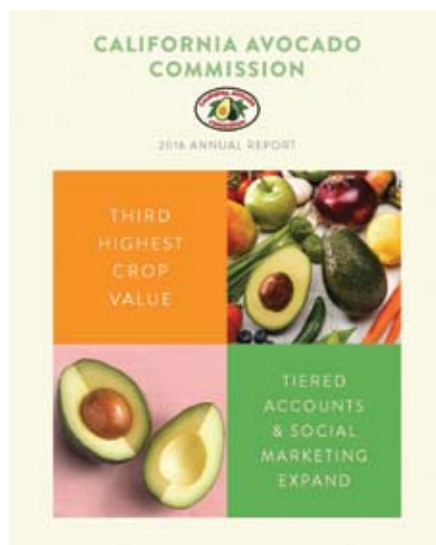
## The 2016 California Avocado Commission Annual Report Is Now Available Online

In an effort to maximize efficiencies, in 2014 the California Avocado Commission (CAC) moved to producing its Annual Report as a strictly digital publication. CAC is pleased to announce that the *2016 Annual Report* has been completed and is now available to the industry through the California avocado grower website, [www.CaliforniaAvocadoGrowers.com](http://www.CaliforniaAvocadoGrowers.com).

The CAC *2016 Annual Report* provides highlights concerning a diverse range of activities funded by the Commission, as well as industry statistics and financials.

Below are highlights from this year's *Annual Report*:

- A look at how the California avocado season rallied, after an influx of imported fruit at the start of the season, to finish with the third highest crop value in California avocado history
- A farewell message from outgoing CAC Chairman Doug O'Hara, an introductory message from incoming CAC Chairman Rick Shade and CAC President Tom Bellamore's take on the importance of our industry's alignment around a "product that nobody else in the world has"
- A review of steps taken by the Commission to modernize the organization, including revisions



- to the composition of the Board, redefining the definition of "producer" in CAC law and redistricting results
- Highlights from CAC's early season #BigGameAdd campaign
- A synopsis of the Commission's tiered marketing approach and the successes of its tier one retail and foodservice outreach and marketing efforts
- An overview of CAC's innovative "show and share" consumer marketing campaigns and a summary of the impressions garnered
- A showcase of industry awards presented to the Commission and its staff
- A breakdown of grants secured by the Commission that will be critical to pest management and export market research

- A look at the new Commission logo
- A status report on advances made by CAC in accessing global markets
- Summaries of independent research studies tracking avocado category growth and consumer preferences
- Recent developments in the diminishing threat of the polyphagous shot hole borer (PSHB) and Kuroshio shot hole borer (KSHB)
- Audited Financial Statements (2015-16)
- Ten-year Industry Statistical Data

The *2016 Annual Report* can be viewed online as a digital flipbook or downloaded as a pdf here: [CaliforniaAvocadoGrowers.com/commission/accountability-reports/annual-report](http://CaliforniaAvocadoGrowers.com/commission/accountability-reports/annual-report).

If you would like to receive a printed version, the Commission will print a copy in-house and mail it to you. A hard copy of the *2016 Annual Report* can be requested via email, phone, fax or regular mail or by returning the tear away postcard included in this article. 📧

**Email:** [cac.iaf@avocado.org](mailto:cac.iaf@avocado.org)

**Phone:** 949.341.1955

**Fax:** 949.341.1970

**Mail:** California Avocado Commission  
12 Mauchly, Suite L,  
Irvine, CA 92618





Growers are the heart and soul of our business.

We are proud of the lasting relationships we've built with many of the best, highly-skilled growers in California. We know you, as California growers, are ardent stewards of the land and take pride in the quality fruit you produce. We share your passion.

From the ranch to the market, we provide growers with timely cultural advice and guidance on timing harvest. As a global packer, we monitor the pulse of daily supply and demand, while servicing a worldwide customer base.

Let Mission's expertise in the global marketplace help you maximize your return.



SOUTH: 951.695.4636 | NORTH: 805.488.3575 | [worldsfinestavocados.com](http://worldsfinestavocados.com)

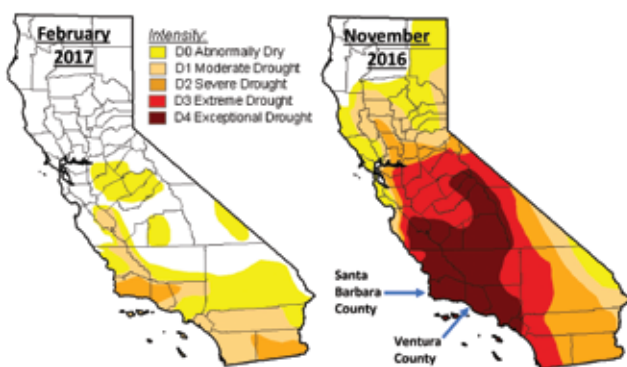


By Ken Melban  
Vice President of Industry Affairs

## California's Water Conditions and the Importance of Lake Oroville

**U.S. DROUGHT MONITOR – CALIFORNIA**

Drought Conditions (Percent Area)	None	D0	D1	D2	D3	D4
<b>Current</b> 3/21/17	61.66	21.47	12.69	4.19	0.00	0.00
<b>Last Week</b> 2/14/2017	43.94	31.86	16.78	6.68	0.73	0.00
<b>3 Months Ago</b> 11/22/2016	12.03	14.93	12.77	17.47	21.76	21.04



### California's Water Conditions

With California's 2017 hydrological conditions off to a historic start, almost all avocado growers have received a long overdue break from irrigation demands. This has resulted in a short-term cost savings for growers either because they haven't had to purchase

agency water or pump water from their own wells.

Due to the strong atmospheric river conditions over the last few months, most reservoirs throughout California are close to capacity, aquifers are slowly being recharged and snow pack levels are nearing record depths. This is obviously great news for California. However, water-related challenges remain in specific areas of the state, and some are more obvious than others.

The U.S. Drought Monitor for California (box to the left) provides a very compelling illustration of how rapidly California's drought conditions have improved. In November, 2016, almost 75 percent of California was classified as being in Moderate, Severe, Extreme, or Exceptional drought conditions. Of

that nearly 43 percent was considered Extreme to Exceptional drought, including almost all avocado producing areas. Now, in just three months, none of California is in Extreme or Exceptional drought conditions, with almost 62 percent of California now completely out of the drought.

Most avocado growing regions remain in Moderate to Severe drought conditions, but that's a major improvement from November, 2016. At the time of this writing a significant series of storms have just made their way through California resulting in very heavy rainfalls in the areas of Santa Barbara and Ventura Counties. A total of 7.6 inches of rainfall was recorded at the California Avocado Commission's Pine Tree Ranch in Ventura County during the period of February 17 – 20. This is great news and these storms, as evidenced by the Drought Monitor, have significantly improved the hydrological conditions within those two counties and throughout California. We are not out of the woods yet, but things are looking much better.



## The Importance of Lake Oroville to Southern California

The Metropolitan Water District (Metropolitan), which serves nearly 19 million people, receives an average of 30 percent of its annual supply from the State Water Project (SWP). In a typical year, Metropolitan, the largest contractor on the SWP system, receives about 50 percent of the SWP's deliveries. Roughly 50 percent of California's avocado acres are located within the Metropolitan service area, although not all are irrigated entirely by Metropolitan supplies.

Lake Oroville, located in northern California 450 miles from downtown Los Angeles, is where the SWP begins. As the hydrological conditions dramatically improved over the last few months, Lake Oroville continued to fill, ultimately reaching capacity. But it didn't stop there — and because of the deluge of rain and snow, water began to spill over Lake Oroville's spillway. In addition, for the first time since it was completed in 1968, water began to spill over Lake Oroville's emergency spillway. A significant area of concrete washed out of the spillway and earth was cascading down from the emergency spillway. There was concern the Lake Oroville Dam would fail, and in February emergency evacuations were ordered for nearly 200,000 residents in the potential pathway. As of this writing it appears Lake Oroville Dam will not fail, thereby averting an unimaginable catastrophe. However, there remain significant questions as to the structural integrity of both the spillway and the emergency spillway; it's very likely significant fixes must be made as soon as possible. The extent of the damage and any necessary fix is still undetermined, but once the weather stabilizes experts will assess the damage and determine next steps. It is possible work will begin this summer to repair the Lake Oroville Dam. How long that could take is unknown. Currently Metropolitan has been guaranteed 60 percent of their SWP allocation and that number is expected to increase.

The other source of imported water for Metropolitan is from the Colorado River (CR), which has much higher salinity levels than the SWP supply. Typically, Metropolitan blends both SWP and CR supplies throughout the year. When the SWP supply has been very low, growers have received water supplies with much higher salinity levels. In mid-February, Metropolitan operations announced that all remaining deliveries to customers for 2017 are expected to come from the

SWP. This is great news for avocado growers and would result in a better quality of supply for 2017.

Unfortunately, however, because of the situation with Lake Oroville, water supplies could now become less certain. Metropolitan is counting on deliveries of at least 60 percent of the SWP allocation. If the Lake Oroville supply must be reduced to allow for structural fixes to the dam, it's possible Metropolitan will receive reduced SWP deliveries. This will not only impact Metropolitan's volume of supply but also their ability to deliver only SWP supply for this year.

It's too early to project how this may impact Metropolitan's supplies, but who could have predicted that the amount of water that brought most of California out of drought conditions would also reveal a significant infrastructure problem within the SWP? Or that repairs to the Oroville Dam may result in a reduction of SWP deliveries even though there is a historic water supply? All of this would be very hard to believe, if it weren't true. 🙄



# Grower Profile



*New plantings at a Simpatica grove in Santa Barbara County.*

## Shared Experiences Launch Simpatica Down Avocado Path

By Tim Linden

**J**amie Johnson comes from a multi-generational farming family. Bryan Berkett comes from a multi-generational real estate family. Though these seemingly disconnected upbringings would not appear to be fertile grounds for fomenting a partnership, in fact it was a similar upbringing and value system that led them to form Simpatica and become a prominent avocado grower in California.

When they first met at a restaurant in the spring of 2012, a 20-minute chat turned into a four-hour discussion of values, culture and shared experiences. Both were influenced by their family business and both note their grandfather's had a huge impact on their lives. They both believe in a "value-driven" company where "culture" is truly more important than profits.

"The first six months we got to know each other and talked about our lifestyles and our families and what we believed in,"

said Berkett.

"The second six months we talked about values and culture and what was important to us," said Johnson. "It wasn't until after that that we started talking about the company we wanted to form."

Johnson is a fourth generation California farmer. His great grandfather, A.J. West, started the farming tradition with citrus groves in Orange County, and his grandfather, Harry Johnson, spent his career in the same business running orange, lemon, and avocado ranches as well as sitting on the Sunkist Board of Directors for over 20 years. A young Jamie fondly remembers walking the groves with his grandfather. After college, Jamie was working as a lifeguard in Newport Beach in 2004 when his grandfather asked him to work with him on their Rancho Simpatica grove. "A couple of weeks later I was working the irrigation lines on the ranch. I did that for two years."





*Simpatica's next generation of farmers enjoy spending time on the ranch.*

Johnson soon caught the avocado bug and has been in the industry ever since. He has worked within the avocado industry in several different capacities in Ventura County, built a large growing operation in Brazil, served as Chairman of the Hass Avocado Board for 3 years and bought his first avocado ranch with Berkett in Ojai in 2012.

Berkett is from a fourth generation real estate family. His grandfather believed in the value of not just buying land, but holding onto it and started the family down that path. Berkett's grandfather was his mentor in the real estate business and Berkett did quite well in real estate during the first decade after he graduated from college. But he was looking for something more fulfilling to do – and that's when he met Johnson in 2012.

Their six months of conversation covered a variety of subjects with their shared love of avocados coming to the forefront. Remembering his great grandfather's credo and value of buying and holding land, the idea of being a grower appealed very much to Berkett. While Johnson, with his family farming roots, already felt a "deep connection" to the land.

As their conversations intensified throughout 2013, they developed a business plan...of sorts. What they actually developed was a shared goal to create a value-driven company with a culture where family, employees, customers, and healthy, sustainable food come first. Once they agreed on their values, the concept of becoming a significant player in the avocado business flowed freely. Both strongly believe in the future of the California avocado industry, and as some growers exit the business, they see opportunity and very strong niche markets.

In April of 2014, their first hire was Scott Bauwens, who

was working for a prominent avocado packing house, to be their chief operating officer. Soon thereafter Aris Babayan was added to the team as director of asset management. Bauwens was happy in his position in the packing industry but also loved the idea of starting something from the ground up, creating and molding the culture from the start, and especially transitioning into the farming side of the business. Like the company's co-founders, he said, "I firmly believe in California avocados."

The team quickly set about the business of finding suitable land to buy. Using their own funds, as well as investments from friends and family, Simpatica began exploring land-purchasing opportunities. Babayan said that within about six months, by the fall of 2014, they had closed on numerous ranches both in the northern and southern growing regions.

Johnson, who handled the farming side of the partnership, started to worry. "I didn't think we had the bandwidth to handle everything we had purchased. We were growing too fast and I believed we needed one more person."

Just as he was convinced that Bauwens and Babayan were the perfect fit, they needed a top-notch farm manager. At the time, Tyler Cobb was with a prominent avocado packing house and had worked with both Johnson and Bauwens in their previous avocado dealings. Cobb soon came aboard as director of farming operations.

"He rounded out the group and was the perfect hire," said Johnson.

Berkett admits to being a bit reluctant at first simply because he did not know Tyler. But he agrees today that the team of five – who as a group hold the vast majority of the private firm's ownership – is a perfect match. My 90-minute



interview revealed a group of compatible partners who finish each other's sentences and have the same family values and culture. One of the other partners of the operation is the Simpatica Foundation. The Foundation reaps some of the profits of the organization for the purpose of ensuring that this becomes a multi-generational firm and that the children of the employees have access to educational opportunities.

But the business goal of Simpatica is to continue to build a significant organization focused on the California avocado industry, with a keen eye toward other growing opportunities as they arise. Berkett said they are always looking at other crops, "but we have yet to pull the trigger on any crop other than California avocados."

The partners are still actively pursuing grove and land buying deals in the avocado regions of California. Most of their acreage resides in the production area stretching from Ventura to Santa Barbara, but they are entertaining opportunities elsewhere as well. "Water is the key," said Berkett.

Simpatica is interested in buying groves that have access to water – preferably two sources: well and district water. Bauwens said the company will consider any grove but it has to work for them. It has to be good land, it has to have water and it has to fit into their operational plans. "It has to be a good fit," he said.

But to date, they have found plenty of "good fits," making them a significant stakeholder within the California avocado farming industry.

It might seem difficult to manage that much land but the team of five claims to treat each acre with the same fervor that any committed grower might. They talk about it in the same manner. "No one cares about a grove as much as its owner," said Johnson.

Tyler said the realities of grove management means that any California grower with 100 acres or more has to rely on hired men to walk those acres. Simpatica is no different. The company structure has Bauwens as the point person as chief

operating officer. Cobb reports to him and oversees each ranch's operational staff, including a farming manager and a foreman at each ranch. Johnson said the company follows a strict military line of command with each successive level reporting directly to the person above, and that chain of command is never broken.

Simpatica believes it is managing its acres just as any caring and dedicated grower would. The company is currently experimenting with different acreage density. Johnson grew up planting on 20 x 20 foot spacing, and anything else seems foreign. But Cobb said 30,000 new trees were planted this past fall on several different spacing schemes including 16 x 12 and 14 x 14. While that spacing resulted in about 225 trees per acre, Cobb noted that some Chilean farms have 500-600 trees per acre. He indicated Simpatica will continue to experiment to find the right mix for each of its ranches.

Yield, they agree, is the key to success in the California avocado industry. "I don't know how anyone can survive with less than 10,000 pounds per acre," said Johnson.

Bauwens agrees and notes that although California avocado acreage has declined in recent years, increased yields could keep production close to status quo. The group laments this year's light crop and Cobb said there are cultural activities that can be undertaken to mitigate the alternate-bearing tendencies of the crop. "But you can't go out and prune all of the acres at the same time. That's impossible," he said, noting that these mitigation efforts will take time.

Time and time again, the discussion gets back to the California avocado industry and its bright future. Like a fine wine, Berkett believes the California avocado can receive a premium price in the marketplace, especially as U.S. and global consumption continue to rise. Each member of the team said, at one point or another during the interview, that California – during its time in the market – produces the best avocado there is, especially when it is sold and consumed nearby. Bauwens said CAC has done a wonderful job differentiating California fruit and Simpatica believes that is the best path to follow.

Johnson reiterated that the company is committed to the California industry. Because of its size, Johnson realizes that Simpatica has cost advantages in buying inputs, scheduling harvest crews and securing a fair price for its crop. For many in the state this is not possible, however he said he is open to working with other producers on some type of collaborative basis in an effort to extend these advantages.

In the end, the team revealed why they were eager to get their story told.

"We are not hedge fund guys," said Bauwens.

"We're not Wall Street," said Johnson.

"We're simply a group of guys that love to grow and eat what we consider is the perfect fruit – avocados," said Berkett. 🥑



**NON-GMO**

# BIOSTIMULANT FERTILIZERS, PEST CONTROL & BIO FUNGICIDE

**INCREASE FLOWERING  
AND FRUIT PRODUCTION**

**WHEN USING  
PURE PROTEIN DRY**

**99% OF NITROGEN DERIVED FROM  
FISH PROTEIN HYDROLYSATE,  
INCREASES WEIGHT OF  
FRUITS & VEGETABLES**

**PURE PROTEIN DRY**

**15-1-1 • 11-13-8**

**5-12-14 • 7.5-1-25**

**PRIMO AMINOS**

**18 TYPES OF AMINO ACIDS  
80%+ AMINO ACIDS  
100% WATER SOLUBLE**

**CONTAINS IRON & ZINC  
PLUS BENEFICIAL MICRO ORGANISMS**

**BACILLUS SUBTILIS  
FIGHTS POWDERY MILDEW  
BACILLUS THURINGIENSIS  
HELPS TO CONTROL BORER LARVAE**



## *Weed-a-Way* CONTACT AND PRE EMERGENT HERBICIDE



## **EX-ICUTE™ & RID-BUGS**

**25(b) OILS MINIMUM RISK  
ORGANIC INSECTICIDE:**

APHIDS



BAGRADA  
BUGS



LYGUS  
BUG



BORER  
BEETLE



MITES



SCALES



THRIPS



WHITE  
FLIES



**AND BIO-FUNGICIDE  
CONTROLS:**



POWDERY MILDEW



RUST ON LEAVES



BOTRYTIS



HULL ROT



ALTERNARIA



ANTHRACNOSE



[www.OrganicAGProducts.com](http://www.OrganicAGProducts.com)

Guaranteed by AZ ENTERPRISES INC DBA ORGANIC AG PRODUCTS  
2367 Brant St., • Arroyo Grande CA. 93420

**SALES CONTACT INFO:**

**JOE HASLETT**

**(805) 748-4033**

[joehaslett.oap@gmail.com](mailto:joehaslett.oap@gmail.com)

**ED ZYBURA**

**(805) 550-7776**

[edzybura@charter.net](mailto:edzybura@charter.net)

# The Challenge of Salinity:

## Hope for the Future with New Avocado Rootstocks

By: Peggy Mauk,  
*UCCE Specialist,  
UC Riverside*

Rui Li,  
*Assoc. Specialist,  
UC Riverside*

MaryLu Arpaia,  
*UCCE Specialist,  
UC Riverside*

Donald Suarez,  
*Lab Director,  
USDA ARS Salinity Lab*

Nydia Celis,  
*M.S. student,  
UC Riverside*

Alyeda Acosta Rangel,  
*Ph.D. student,  
UC Riverside*

California avocado growers face diminishing returns in areas where *Phytophthora* root rot and saline irrigation water predominate. To help find answers to this production issue, a research trial was planted at the University of California, Riverside (UCR) in 2011. The goal of this trial was to determine if there are root rot-resistant rootstocks that are also tolerant to salinity. The study was funded by the California Avocado Commission.

### Background

Generally, salinity has a broad range of effects on plants, and therefore, there also are many different mechanisms for plants to tolerate this stress. Plants can reduce toxicity by reducing the accumulation of toxic ions in the leaf blades (sodium and chloride exclusion), and/or by increasing their ability to tolerate the salts that they have failed to exclude from the shoot, such as by compartmentation into vacuoles (tissue tolerance).

Salt tolerance of avocados is com-

plicated because it is a salt sensitive species and ion toxicities (predominantly sodium and chloride) cause detrimental effects on growth and yield. For many fruit crops, damage to the plants can be related to the concentration of specific ions, e.g. chloride or sodium in the soil solution and/or plant leaves, rather than to the total soil salinity. A frequent toxicity problem is from chloride in the soil solution. If the chloride concentration in the leaves exceeds the tolerance of the crop, injury symptoms develop such as leaf burn or drying of leaf tissue. Avocados are especially susceptible to leaf injury caused by the toxic accumulation of sodium and chloride in the leaves. Enhancing varietal or rootstock salt tolerance gives farmers an opportunity to continue growing great quality avocados while using low quality water or planting in salt affected soils. For this reason, classification of fruit crops – with respect to specific salinity – according to varieties and rootstocks is important.

In 1992, Drs. Oster and Arpaia

(UCR) and later Mickelbart and Arpaia (2002, 2007) showed that the tolerance level of Hass avocado was dependent on the rootstock used. Since Hass was the common scion, it was evident that the large variability in plant response was due to differences in the rootstock's ability to exclude sodium and chloride concentrations from accumulating in the leaves. The influence of chloride concentrations and other elements in the leaves was studied because California growers are faced with having to use irrigation water high in salts, especially high in sodium and chloride.

### UCR Salinity Trial

For this trial, avocado rootstocks grafted with Hass were planted. Trees were irrigated with high quality irrigation water for 1.5 years before imposing the salt treatments. Selected rows were irrigated with water containing a blend of salts that mirror lower quality irrigation water in California. The salinity level was adjusted to electrical conductivity (EC) 1.5 dS m<sup>-1</sup> with 175 mg



**Table 1. Rootstocks evaluated for salinity tolerance.**

University of California Riverside	Westfalia Technological Services
PP 4 (Zentmyer)	Dusa
PP 14 (Uzi)	R0.05
PP 24 (Steddom)	R0.06
PP 40	R0.07
PP 45	R0.16
Thomas	R0.17

L<sup>-1</sup> chloride. Table 1 lists the rootstocks tested.

Prior to imposing the salinity treatment, soil samples were collected. In December 2013, as was expected, the two treatment plots were very similar in both EC and chloride concentration because there was no salt treatment being applied. For the duration of the trial, the trees in both salt and control rows were irrigated two to three times per week depending on the weather. The amount of water applied was determined using the irrigation calculator found at [www.avocadosource.com](http://www.avocadosource.com). We used the avocado crop coefficient of 0.86 and a target leaching fraction of 10 percent in year one and 20 percent in years two and three. The extra irrigation amount was used to maintain the leaching fraction delivered with each irrigation. We increased the leaching fraction for year two based on the overall health of the trees in the fresh water treatment. We found that a 10 percent leaching fraction was not sufficient as we observed some salt damage at the 10 percent leaching fraction.

Salt treatments were gradually imposed from November 2013 to January

2014 in a step-wise manner to enable osmotic adjustment with the ultimate salt concentration of EC 1.5 (salt treated rows) and 0.67 dS m<sup>-1</sup> (fresh water rows irrigated from the Gage Canal).

Leaf samples were collected in October 2013 (prior to salinization), 2014 and 2015. Samples were analyzed for calcium, magnesium, sodium, potassium, phosphorus, sulfur, chloride, iron, copper, manganese and zinc by inductively coupled plasma/optical emission spectrometry (ICP/OES). The mean chloride content of the leaves varied from 42 to 120 mmol kg<sup>-1</sup> (dry weight) depending on the rootstock prior to salinization. This preliminary analysis showed that the rootstock variety expected to be more salt tolerant was either a chloride excluder or did not translocate chloride to the leaves, a trait that is expected for more salt tolerant plant varieties. From the preliminary leaf analysis we saw that R0.05 and Dusa were chloride excluders, which turned out to have some of the highest yields and highest survival rates.

Leaf analysis proved to be a useful method to identify salt sensitive

**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  
Tel. (805) 647-2262 Fax. (805) 671-9738  
Serving CA farmers' nursery stock needs since 1956  
[www.brokawnursery.com](http://www.brokawnursery.com)





Figure 1. R0.05 fresh water (left) and salt treated (right). Overall survival rate in salt treated row was 66.67 percent. Photo taken in 2015.

rootstocks such as R0.06, R0.07, PP14 and R0.17. Salt sensitive rootstocks had high chloride and sodium concentrations in the leaves and also were the least salt tolerant with 100 percent mortality in the salt treated rows irrigated with saline water for 23 months. The rootstocks R0.05, Dusa, PP40 and R0.18, accumulated the least amount of chloride in the leaves and were also the rootstocks that accumulated the lowest amount of chloride in the roots. This indicates that chloride exclusion is occurring at the root interface. This experiment shows, under field conditions, the influence of rootstock on the concentration of chloride and sodium and other

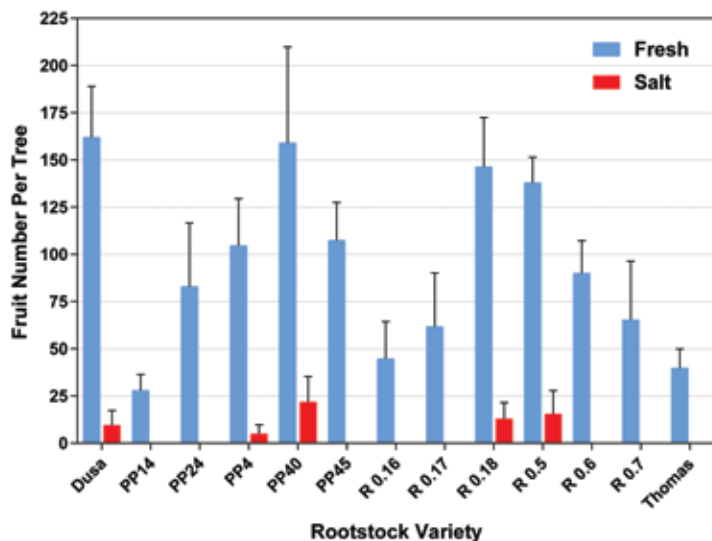
elements in the leaves since rootstocks can impart salt tolerance to the scion of trees, usually by limiting the excessive accumulation of chloride and sodium from the scion. We observed 100 percent mortality after 20 months of salinization at  $EC\ 1.5\ dS\ m^{-1}$  for the following rootstocks PP14, PP45, R0.06, R0.07, R0.16, and R0.17. The rootstocks that had the highest survival rate were PP40 and R0.05 both with a survival rate of 67 percent, followed by R0.18 with 63 percent and Dusa with 43 percent.

Fruit harvested in 2015 showed that there were significant differences in the number of fruit and weight of the fruit between treated and non-treated

trees after one year of salt treatment. There also were significant differences in the number of fruit and weight of the fruit among the rootstock varieties in the control and salt-treated treatments. R0.05 and Dusa had the highest number of fruit and fruit weight in the control group; whereas, R0.05 and PP 40 had the highest number of fruit and fruit weight in the salt treatment. The number of fruit per tree ranged from 0 to 149, with an average of 18.8 fruit per tree. The total weight of fruit per tree ranged from 0 to 45.3 lb., and the average was 5.7 lb. per tree.

In 2016, after two years of salt treatment, there were significant dif-





ferences in the number of fruit and weight of the fruit between treated and non-treated trees. Additionally, within the fresh treatments there were significant differences among rootstocks with Dusa and PP40 having the highest number of fruit and fruit weight. However, within the salt treatment, there were no significant differences in the number of fruit or weight of the fruit among the rootstock varieties although PP 40 and R0.05 had the highest number of fruit and fruit weight under salinization. With the increasing length of the salt treatment, the fruiting capacity in the tolerant rootstocks significantly decreased. This may be due to the decrease of the photosynthesis rate, the growth of the tree or the ability to keep the fruits under the long-term salt stress.

In addition to leaf analysis, yield, leaf burn, tree height, canopy volume, trunk diameter and survival, we looked at physiological parameters to evaluate the influence of salt stress on the following rootstocks: Dusa, PP4, PP40 and R0.05 rootstocks. We found that salt stress significantly reduced the carbon assimilation rate in damaged leaves compared with leaves from control trees and healthy leaves from trees under salinity. In this trial, the damage was more severe in PP40 and least severe in R0.05. Salinity also affected water use efficiency (WUE) in avocado, by reducing its performance. WUE is a composite variable based on both photosynthetic capacity and the rate of water loss. PP40 had the

highest transpiration rate (loss of water from the leaves) and the lowest WUE compared to Dusa and R0.05. Our findings showed that rootstocks affected the physiological performance of Hass avocado. Dusa and R0.05 were the most tolerant rootstocks under stress conditions.

Based on leaf analyses and the correlation of chloride in leaf tissue with tree survival data, we conclude that chloride accumulation in the leaves from both the control and salt treatments provided a good indicator of survival under the salt treatment or, in turn, salt tolerance. We also determined that sodium content in leaves was not a good marker for salt tolerance of avocado rootstock. There is a reduction in avocado yield at a chloride concentration of approximately 280 mmol kg<sup>-1</sup> dry weight in the leaf tissue. In this experiment, the rootstocks that restricted chloride ion uptake and translocation to the mature fully expanded leaves were R0.05, PP40, R0.18 and Dusa, which also were the rootstocks that had minimal effect on growth and yield exhibiting the highest yield, highest trunk diameter and highest survival percentage.

Based on the currently available rootstocks that were evaluated in this study, Dusa had the highest salinity tolerance. Of rootstocks tested that are currently experimental, R0.05 and PP40 showed the most promise under these conditions. Further testing is needed to determine suitability in the various avocado production areas in California. 🥑

### Preliminary conclusions:

- Fruit number, weight, and quality were negatively impacted by salinity
- Salt stress decreased the physiological performance of avocado 'Hass' independent of the rootstock
- Water and energy availability were directly impacted by salt stress
- Chlorophyll fluorescence indicated a trend that salinity reduced the photosynthetic energy conversion
- Differences in crop yield could not be explained by the photosynthetic capacity at the leaf level
- Selections such as R0.05 showed a promising increase in water use efficiency under saline conditions

## CAC's Pine Tree Ranch Provides Challenges & Opportunities

**T**he California Avocado Commission (CAC) leased 11 acres of the Pine Tree Ranch (PTR) in Santa Paula (Ventura County) from the Cal Poly Pomona Foundation in 2013 for use as a demonstration grove. The purpose of this endeavor was to have a place where CAC could set up demonstration plots showing growers the results of CAC-funded research or showcase new technologies that may be of benefit to growers. As every grower knows, the best laid plans too often are in conflict with reality.

Of the 11 acres leased, two acres were mature avocado trees and nine acres were old lemon trees that were removed, chipped and replaced, in 2014, with about seven acres of newly-planted avocados. Those newly-planted trees were promptly eaten by drought-weary deer in the 2014-15 winter. In 2015, the small well on the property was recommissioned and we finally had our own water supply for our portion of the ranch. By the end of 2015, it was clear something was terribly wrong. After some investigating, we learned that our well had exceedingly high salts and was killing our trees. In addition to these setbacks, in 2015 the threat of shot hole borers led to the beginning of pesticide trials at Pine Tree Ranch since these trials involved unregistered materials that would require crop destruct. The combination of these trials and the toxic well water severely debilitated the two-acre block of mature trees in CAC's

leased acreage.

In 2016, CAC regrouped and focused on figuring out how to salvage our investment in Pine Tree Ranch and utilize the property to provide grower demonstrations. We are happy to report that the CAC-managed portion of PTR is looking much better these days and plans are coming together for some exciting new demonstration projects.

### Rehabilitating Old Trees

The two acres of mature trees that CAC inherited have an unknown history. By looking at old aerial images we know that the block was either stumped or replanted in the early 2000s. However, except for recent replants, we do not know the rootstock for any of the trees in the block. Given the recent well-related salinity issues and pesticide injection trials, the block needs rehabilitation and that's exactly what we plan to do.

Every grower knows that if they can afford it, replacing an old block and starting over with new trees is probably the best way to go. However, economic realities often prevail when making decisions. When faced with the decision about what to do with an old block of trees, growers must consider a lot of questions. How long can you afford to be out of production? Can you afford the replacement trees? Can you afford the labor to remove the old trees and properly plant the new ones? Often the answers to these questions result in

growers doing something other than removing and replacing an old block.

Since the purpose of PTR is to be a demonstration grove, we've decided to share our experiences with growers as we look at several different options for rehabbing our old block. In doing so, we hope to help you make more informed decisions in the future.

The two-acre block will be divided into quadrants, approximately one-half acres each, and each quadrant will be rehabbed using a different method:

1. Remove and replant
2. Stump and replant dead or missing trees
3. Stump and top work, and replant dead or missing trees
4. Pruning and intensive fertilization to redevelop the existing tree

For each rehab method, we'll keep records of the input costs – trees, labor, fertilizer, etc. – and production records. These data will be shared with growers in future magazine articles and at PTR field days. Our hope is that we will be able to provide growers with information about each of these scenarios so that when you are faced with making a similar decision you'll have the necessary information to make the best decision for you and your grove.

### Irrigation Automation

Although we were fortunate to have a good rainy season this year, water





Figure 1. An aerial image of the two acre mature block of avocados at Pine Tree Ranch from February 2005 (left) and October 2016 (right). The image from 2005 shows either newly planted trees or stumped trees; the image from 2016 shows the current status of the block with many missing, dead and weak trees. (Images from Google Earth)

is going to continue to be a limiting factor for California agriculture going forward. There are many systems available that claim to help growers with their water woes, but knowing your trees' water needs and applying water to meet that need when it is needed is a tried and true method. Because there are so many products on the market, many growers don't know where to start.

CAC has received a California Department of Food and Agriculture specialty crop block grant to install an automated irrigation demonstration block at PTR so growers can see a couple of different systems in action, and see how they perform compared with traditional irrigation scheduling.

A new one-acre block is being planted that will be divided into four different irrigation zones. One zone will be irrigated by traditional means, using an irrigation calculator to incorporate evapotranspiration, tree size and irrigation system parameters to calculate how much water to apply. The other three zones will be irrigated automatically based on soil moisture sensor data that is used to open and close irrigation valves automatically. Each of the three

zones will use different soil moisture sensors to show the range of price and sophistication of the sensors available.

The benefit of irrigation automation over traditional irrigation scheduling is in the timing of water application. For example, if you know your tree needs 100 gallons of water during a specific week of the year what is the best way to apply that 100 gallons? Should you irrigate in one application over several hours or is it better to divide irrigation sessions up into several smaller applications? To answer that question, you need to know about your soil type (maybe there's multiple types in your grove), your soil's water holding characteristics, and your tree's rooting depth and area at a minimum.

By using soil moisture sensors placed near the soil surface (about four inches deep) and at the bottom of the root zone (about 24 inches), you can tell when your soil profile is drying out and when it is full. If those sensors are connected to a valve controller, your irrigation can be turned on automatically at pre-set soil moisture values. An automated system is especially useful on very porous soils with poor water hold-

ing capacity, like decomposed granite, because it allows you to apply only as much water as the soil can hold at a given time. This prevents water wastage from deep percolation and reduces nutrient leaching as well.

Based on the experience of some avocado growers who are using automated irrigation systems, preliminary data from PTR's own soil moisture sensors and experiences in other tree crops, the potential for water savings could be as high as 50 percent or more compared with conventional irrigation scheduling and manually turning systems on and off.

## Berm and Flat Planted Trees

At the west edge of PTR is a 10-row block of trees with five rows planted on flat ground and five rows planted on berms. Typically, berms would be used in heavy soils where you need to improve drainage, or soils with heavy root rot pressure where the improved drainage can help with disease management. Neither of these situations exist at PTR, where we have very gravelly, well-drained soil and low root rot pressure. However, having some bermed rows provides us with the opportunity to look at the benefits and discuss the pros and cons of berms during field days.

Dr. Jochen Schenk, a professor at California State University at Fullerton (CSUF), has taken advantage of these bermed rows and his graduate student Miriam Moura is conducting some of her master's degree research at PTR. Moura has installed sap flow sensors on several trees planted on the berms and the adjacent flat rows and is looking at the effects of the berms on tree water use. The sap flow sensors measure the rate at which sap – and by extension water – is flowing through the tree, and these data can be converted into tree water use.



Figure 2. A Dynamax sap flow sensor prior to installation (left) and a sap flow sensor installed on an avocado branch (right). The sensors are installed on branches of about one inch diameter and must be adjusted about every four weeks to account for branch diameter growth. The sensors are hardwired to a base station, which then transmits the data to the internet via a wi-fi connection or cellular modem.

Although the sensors were only installed in mid-2016, clear differences can be seen between the bermed and flat planted trees. Because both plantings are being irrigated the same and the berms drain more quickly than the flat rows, the sap flow slows sooner after an irrigation in the bermed rows as the amount of available water decreases. Moura will be providing growers with an update on her research in an upcoming issue of *From the Grove*, and it will be a featured tour stop during the 10<sup>th</sup> International Workshop on Sap Flow that Dr. Schenk will be convening at CSUF in May 2017.

### High-density Plantings

The high-density block that was planted in 2014 is developing well. The block consists of trees planted at nine

different spacings: 15 x 15, 15 x 10, 15 x 7.5, 10 x 15, 10 x 10, 10 x 7.5, 7.5 x 15, 7.5 x 10, and 7.5 x 7.5 (feet between rows x feet between trees). To date, there has been no pruning done on any of the spacings, but the highest densities are starting to become crowded.

This block will be utilized in upcoming field days to discuss different management approaches to high density plantings. One potential tool that will be looked at is the use of Tre-hold® Sprout Inhibitor as a means of reducing and slowing regrowth following pruning. Since it was registered for use on avocados a few years ago, Tre-hold® has gained a small, but loyal following among some growers, but to our knowledge no one has ever looked at it as a possible tool in managing high density plantings. In other parts of the

world where avocados are grown at high densities, uniconazole (a gibberellic acid inhibitor) is used to control tree growth, but it is unlikely that uniconazole will ever be registered for use on a food crop in the United States. Thus, Tre-hold® may be our only option for a plant growth regulator for use in high-density plantings going forward.

Although things got off to a slow start and there were numerous setbacks during the first couple of years at Pine Tree Ranch, we are confident that things are on the right track now. We have a great grove management team in place that is eager to work on the various projects outlined above and help us provide readily-applicable production practices information to California's avocado growers. We look forward to seeing you at an upcoming field day. 🥑



By Tim Linden

## Short Crop but Strong Prices Expected

**T**here is no sure thing in life – and that axiom is especially true in agriculture. But it is clearly shaping up to be a strong marketing season for California avocados.

As growers begin to pick fruit in early March, there is no doubt the crop is only about half the size of the one they were looking at a year ago. But marketing conditions have much improved. Several industry representatives interviewed agree that the estimate placing the crop in the 200-225 million pound range is fairly accurate, but mitigating factors may alter that number.

Rob Wedin, vice president of fresh sales and marketing for Calavo Growers Inc., Santa Paula, CA, told *From the Grove* on Tuesday, February 22, that all the rain received so far this season should help the crop make that volume estimate. “It was my opinion that the estimate was a little high,” he said. “This rain should help make the crop.”

Gary Clevenger of Harvest Time Produce, which is headquartered in Oceanside, CA, was a bit more optimistic in terms of the rain's impact. “I think 200 to 225 million pounds is about right, but I won't be surprised if it comes in a bit larger because of the rain. The crop looked like it was going to peak between a 48 and a 60. Now I believe we are going to get a crop that might be a size larger or more. We might see a lot of 36s, 40s and 48s. That will make a difference.”

Thus far, very little California fruit has been picked for the market, which Wedin said is a good thing. “Right now the market is getting stronger,” he said. “It looks like the industry is going

to start to ramp up throughout March, adding a million pounds per week. By the first week in April, California should be shipping about five million pounds per week.”

With the light crop, Wedin does not anticipate volume topping 12 million pounds during any individual week of the season. Calavo estimates that shipments will continue through August. It appears Mexico has a lighter crop than anticipated and even though Peru will probably up its shipments to the United States in late spring and summer over last year, Wedin believes a strong market will persist. In February, Mexico was sending less than 40 million pounds to the U.S. market each week and that weekly number was not expected to top 45 million as the season wears on.

As far as Peru is concerned, he said an accurate count of that country's crop is still more than a month away with no major impact on the U.S. market until mid-May, at which time Mexico's production should be dipping.

On this February day, Wedin said avocados were selling in the \$45-\$50 range and he doesn't expect that to change significantly in the near future. “We have had a very structured situation from Mexico this year, and it looks like it is going to continue.”

Clevenger predicted that California growers would be in a fairly good position all year. “There may be only 215 million pounds out there and we're all (the handlers) competing for it. I expect the (field) price to be in the \$1.50-\$2 range.”

He said last year's summer shortage brought prices up to \$2 for short periods of time, but that it was very difficult to get beyond that number. While the consumer has shown a willingness to pay as much as \$3 for a California avocado, Clevenger said a field price north of \$2 per pound makes it difficult for the various stops along the supply chain to make their money and still see any promotions.

However, he added that the California Avocado Commission (CAC) has done an excellent job positioning the locally grown crop as a premium product. “That message seems to resonate well, especially within the state.”

For the future, Clevenger said that bodes well for California producers as it appears that the vast majority of the state's avocado volume will stay in the state, even in big crop years. “This year most of the fruit should stay on the West Coast; I don't think hardly anything will move further (east) than Denver.”

It's also important to note that as these conversations were taking place, the rain continued to fall. Avocado grower and former CAC Chairman of the Board Ed McFadden said his Ventura County groves finally got a good drenching. Even as the rest of the state was moving out of official drought conditions, that Santa Barbara-Ventura County corridor was stubbornly being bypassed. McFadden said that appeared to be changing in late February. “The fruit on the trees seems to be sizing very nicely,” he said.

That rain should also help the 2018 crop. 🥑

# Informing, Engaging, Entertaining and Inspiring California Avocado Fans via Social Media

**T**he California Avocado Commission's (CAC) varied social media platforms — Instagram, Facebook, Pinterest, Snapchat, Twitter and The Scoop blog — provide the Commission with a means of informing, engaging, entertaining and inspiring its fans to seek out California avocados when and where available.

Each social media platform has a unique character and goals — some rely heavily on artistic photos and visuals, others on 140-character messages, or concise and informative articles — and therefore attract different audiences. Yet each social media channel presents an opportunity to emotionally connect with California avocado fans, provide them with relevant and engaging content, and build brand loyalty.

One of the benefits of utilizing social media is the ability to measure consumer engagement and then adjust social media strategies accordingly. Data from 2016 indicate that as CAC's social media strategies have evolved, the Commission has improved engagement with its targeted consumers. In 2016, the number of views on CAC's social media platforms increased by 300 percent and the level of engagement increased by 445 percent compared to 2015.

The Commission's evolved social media strategy in 2017 will strengthen CAC's emotional connections with fans via a series of integrated initiatives tailored specifically to the unique nature of each social media platform. The strategy will piggyback off the success of CAC's 2016 *Made of California* campaign — an initiative that celebrates everything endemic to the Golden State and positions California avocados as the perfect symbol of the California lifestyle. To distinguish CAC from a large and established social media foodie culture, the







Commission will share trusted trend-setting content, innovative recipes and eye-catching images that showcase the California food scene and the California avocado season.

Because the character and audience of each social media channel is unique, the Commission will continue to tailor content for each channel accordingly.

- Instagram is a visually-driven and artistic platform, so to cater to CAC's foodie fans, the Commission will share only the highest quality engaging photos of California avocados and meals
- Facebook is the perfect channel for sharing CAC's entertaining and easy-to-consume brand stories with a combination of photos, stories and links to The Scoop blog and the California avocado consumer website [CaliforniaAvocado.com](http://CaliforniaAvocado.com)
- CAC's Pinterest page appeals to visual, culinary storytellers, therefore CAC will make it easy for fans to access informative and useful culinary recipes and tips
- Snapchat allows users to share messages, images and videos for a short period of time. The Commission will leverage popular digital photography filters and lenses at branded events that allow California avocado fans to

creatively edit photos and share them with their friends

- Twitter is the ideal means of engaging in two-way, real-time dialogue with California avocado fans with precise, entertaining 140-character-or-less tweets on a frequent basis
- The Scoop blog provides a diverse range of informative, searchable content and recipes that inspire fans to expand their usage of California avocados while learning more about their favorite fruit and its season

To further differentiate California avocados within the social media food scene, the Commission will inject a new palette of California lifestyle colors into its social media imagery. These California-styled posts and images will be shared around specific holidays and events — like Coachella Valley Music and Arts Festival, California festivals and the first day of summer — and as needed as new consumer trends emerge on social media to take advantage of the swell in consumer interest.

Follow CAC on Facebook at [Facebook.com/CaliforniaAvocados](https://Facebook.com/CaliforniaAvocados) and @CA\_Avocados on Twitter, Pinterest and Instagram. 🥑

# Commission's Food Safety Program Continues

By Ken Melban

*Vice President of Industry Affairs*

**E**arlier this year the Commission conducted food safety trainings for growers – the fifth series of food safety workshops since 2012. Meetings were held in San Luis Obispo, Santa Paula and Fallbrook. Based on the large grower attendance and participation at all three meetings, it is evident that industry interest remains strong in becoming Good Agricultural Practices (GAP) certified.

This high level of engagement is a positive signal that the industry recognizes the importance of GAP certification and sends a vital message to consumers, foodservice operations and retailers: California avocado growers are willing to stand behind, and further strengthen, our premium brand by certifying our practices are safe.

There remain two driving forces for food safety certification in the United States. First, the Food Safety Modernization Act (FSMA), which became law in January 2016, places responsibility for the safety of all fresh produce and meat sold in the United States on the Food and Drug Administration. This law covers all produce sold in the United States including offshore supplies. Over the last five years, as FSMA was being finalized, the Commission has provided growers with continuous updates concerning FSMA compliance requirements. Specific information on exemptions and compliance dates can be found in the FSMA box in this article.

There are two important parts of FSMA that will impact current California avocado industry practices. First is the harvesting of windfall fruit. Under FSMA, the distribution of produce that drops to the ground before harvesting is prohibited. While the California Department of Food and Agriculture (CDFA) currently allows for the harvest of windfall fruit, CDFA acknowledges that federal law will preempt state law and is in the process of helping to change the CDFA law. CDFA expects a change in California law before the end of 2017, which will then make the harvesting of windfall fruit illegal within the state.

The second item under FSMA law that impacts our industry is the disallowance of harvesting produce that comes in

contact with the ground unless it grows naturally on or in the ground. Examples of produce that grows on or in the ground are strawberries and carrots. In the strictest interpretation of this section, avocados that contact the ground – such as those hanging from a low branch – will be illegal to harvest.

The other driving force behind food safety certification are the buyers of our fruit. As reported during the recently conducted trainings, some buyers will soon require audit certification, at a minimum, to comply with the Global Food Safety Initiative (GFSI) standards. As such, in late 2016 the Commission modified the food safety manual to support a grower audit against the GFSI standard.

The GFSI audit, as with FSMA and previous audits, remains focused on the core areas associated with potential pathways for microbial contamination:

- People – worker hygiene and health
- Water – hand washing, drinking, irrigation, application mixes, run off
- Soil – soil amendments, prior uses, adjacent uses, contamination
- Animals – wild or domestic

The biggest changes associated with the GFSI audit are the additional record-keeping requirements. In many instances these are records growers already maintain but have not previously been asked to provide. For example, you must be prepared to show pesticide use reports, crop protection material labels, pre-harvest intervals and harvest dates. All necessary licensing, such as pest control adviser (PCA) and qualified applicator licenses (QAL), will be reviewed, and a list of all suppliers must be developed (pesticide and fertilizer suppliers, applicators, restrooms, etc.). Requirements also call for Letters of Guarantee from each supplier confirming they meet the specifications listed under Supplier Requirements. According to GFSI standards, each grove must now have a restroom. Compliance can be met by having a portable facility brought to the grove.

If your harvest contractor(s) is Good Harvesting Practices (GHP) certified, you will simply need to provide a copy of



their audit and a copy of their certificate. However, if the harvest contractor has not been certified, you will need the copies of GFSI training materials, quarterly training records (dated and signed) and copies of bathroom servicing records for your harvest contractor(s). Obviously, it is best if your harvest contractor has been GHP certified. To encourage them to become certified, the Commission will be conducting another series of GHP workshops for that sector.

In the GFSI audit a few questions can result in an “Automatic Failure.” For example, if you harvested fruit before the pre-harvest interval was completed that would be an automatic failure. However, most questions allow for “Corrective Actions.” For these questions, you will be allowed 30 days to correct the issue.

You also will need to set up a Food Safety Committee, even if it’s just a committee of one – YOU! While some of these requirements may seem onerous and even ridiculous, it’s important to remember the purpose of their creation. Simply stated, the objective of these requirements is to help you create a culture where you (and your employees) continuously evaluate and, when necessary, modify your farming practices with an eye on food safety. This can only occur if you are aware of possible pathways for microbial contamination, monitor all activities on your grove and then verify through appropriate documentation.

If you are interested in learning more about becoming GFSI certified, the Commission recommends you first talk

with your handler. Most handlers have staff who are experienced in assisting growers to prepare for the audit process. The Commission also has food safety manuals available for growers upon request. The first step is a review of the Pre-Season Self-Assessment Checklist in the food safety manual to evaluate your level of readiness for an audit. Then you will pull together all the necessary records, conduct employee training, get water testing done, etc. The audit will take a few hours depending on the size of your operation and typically costs around \$700 annually.

The full presentation from the workshops provides examples for many of the items discussed in this article and may be found at this link: [www.californiaavocadogrowers.com/sites/default/files/documents/CAC-Food-Safety-Presentation-1-17.pdf](http://www.californiaavocadogrowers.com/sites/default/files/documents/CAC-Food-Safety-Presentation-1-17.pdf).

While becoming GFSI certified may seem like a daunting task, it is one that you are strongly encouraged to consider. There is, and will remain, multiple supply options for the prospective buyers of your fruit. Don’t put these buyers in the position of not buying your fruit because it doesn’t meet their food safety requirements. Or, even worse, call into question our premium reputation. If we want to maintain California’s reputation as producer of the premium avocado, then we must back it up with our actions.

If you would like to contact the Commission, request a food safety manual or get additional help, please send an email to [cac.iaf@avocado.org](mailto:cac.iaf@avocado.org) or call 949.341.1955. 🍌

## FSMA EXEMPTIONS

### *The Rule does not apply to:*

- Farms that have an average annual value of produce sold during the previous three-year period of \$25,000 or less
- Or a qualified exemption based on two requirements:
  - The farm must have food sales averaging less than \$500,000 per year during the previous three years; and
  - The farm’s sales to qualified end-users must exceed sales to all others combined during the previous three years.A qualified end-user is either (a) the consumer of the food or (b) a restaurant or retail food establishment that is located in the same state or the same Indian reservation as the farm or not more than 275 miles away.

## FSMA COMPLIANCE DATES

- Very small businesses: More than \$25,000 but no more than \$250,000 in average annual produce sales during the previous three-year period – January 26, 2020
- Small businesses: More than \$250,000 but no more than \$500,000 in average annual produce sales during the previous three-year period – January 26, 2019
- All other farms: January 26, 2018



# Health Claim for Avocados Approved:

## HAB, CAC to Emphasize Benefits

By Tim Linden

**I**n December, fresh Hass avocados were granted the right by the federal Food and Drug Administration (FDA) to include a “heart-healthy” claim in advertising and promotional materials, and on the fruit itself.

This designation, granted as the result of a petition by the American Heart Association (AHA), is a long time in coming, and officially confirms what the avocado industry discovered through much research: avocados are good for you and their fat content is “good fat.”

Dr. Nikki Ford, director of nutrition for the Hass Avocado Board (HAB), explained that what the FDA formally did was issue an interim final rule, effective immediately, allowing fresh Hass avocados, as well as all other raw fruits and vegetables, the right to use the “Dietary Saturated Fat and Cholesterol and Risk of Coronary Heart Disease” health claim. She said this allows fruits and vegetables that did not previously comply with the “low fat” definition and/or the minimum nutrient content requirement to make the claim. This new regulation is in line with the FDA’s recent guidance to redefine

the “healthy” nutrient content claim, which took into consideration the breakdown between good (unsaturated) and bad (saturated) fats.

Prior to this new guideline, the FDA determined that any product with three grams of fat or more did not qualify to make the “healthy-heart” claim.

Emiliano Escobedo, executive director of HAB, praised Ford for her efforts in helping the American Heart Association make a strong case for avocados and other raw fruits and vegetables. “Without Nikki’s work this wouldn’t have been accomplished,” he said.

He said in its promotional and advertising materials, HAB will capitalize on this new ruling by using even “stronger language” with regard to the health benefits of avocado than they have previously. Escobedo believes the claim will resonate well with consumers as he called the use of the AHA’s “Hearth Check Program” a powerful message for all consumers, and a key driver of increased consumption of healthy foods. He noted that while a significant percentage of heavy and super



# Aha



You did your part. The fruit looks great. Now it's time to partner with a leading fresh Hass avocado distributor and marketer in North America.

There is a company that consumers and the trade know and trust to bring them premium quality fruit for 125 years. There is a company with an unparalleled network of 23 distribution and ripening centers across North America. There is a company that has long established programs with every major retailer. There is a company that succeeded by working closely with serious growers like you for years.

There is a company that wants to work with you and ensure that you get the best returns possible for your avocados..

**You found it!**



**The Nature of the Best**



© 2017 Del Monte Fresh Produce N.A., Inc.

**For more information:**

1-800-950-3683 | 1-805-488-0881

contact-us-executive-office@freshdelmonte.com  
freshdelmonte.com | fruits.com

f /delmontefreshproduce

@delmontefresh

@delmontefresh

delmontefresh

heavy users of Hass avocados point to the product's health benefits as a reason for increased consumption, there are still many users that don't make that connection. He infers that a greater emphasis on the heart-healthy aspect of avocados will increase consumption.

The HAB executive said the board's future promotional efforts touting this connection also will focus considerable attention on health professionals. This group exerts significant influence on consumption habits of the general public, and while most certainly know that avocados are a healthy food, this new claim greatly reinforces that concept. Ford said many dietitians and nutritionists around the country have to follow the FDA guidelines strictly when creating menus for specific target groups. Even though they knew that avocados contained the "good fat," avocados could not always be included in those diets. Now they can.

Ford revealed that HAB has developed avocado recipes that capitalize on the claim and qualify for the American Heart Association Health Check Program, which basically gives those recipes a ringing endorsement. Escobedo added: "All fresh Hass avocados have long been recognized for their range of health and wellness benefits, and now we can more directly promote their positive role in a heart-healthy diet."

HAB's Nutrition Research Program, established in 2010,

is committed to increasing awareness and improving understanding of the unique benefits of avocados to human health and nutrition. This new guidance on heart health is in line with the latest body of research examining the relationship between avocado consumption and risk factors for cardiovascular disease, which HAB will continue to explore in the research it funds.

Escobedo said not only will HAB promote this new guideline but it also is actively encouraging the other avocado promotion organizations, as well as packers and shippers to exploit the opportunity.

Jan DeLyser, the California Avocado Commission's vice president of marketing, noted that CAC "will be participating in the American Heart Association Hass Avocado Heart Check program. At this time CAC has completed the application to license the Heart Check certification for California Hass avocados sold in the USA, and we expect the certification to be in place before peak season."

She added that preliminary plans include using the mark in specific trade and consumer programs, with potential inclusion in advertising and public relations. She added that CAC will help HAB spread this great nutrition news via social media, including its consumer-forward [CaliforniaAvocado.com](http://CaliforniaAvocado.com) website. 🥑





# YOUR ALARM CLOCK HAS FEATHERS



Your commute is in acres and  
your second car is a tractor.  
You are an American farmer and  
there's a whole world out there  
depending on what you do.  
And we're here to help you do it.



**WE ARE THE FARM CREDIT SYSTEM** — 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**



## FRESH FACTS PICKED DAILY

The Fresh Facts app from Index Fresh is your daily look into the world of avocados. Get useful avocado market information—from bin counts to price estimates to inventory and shipping information—right at your fingertips, every day.



LEARN MORE AND  
DOWNLOAD ON  
THE APP STORE  
OR GOOGLE PLAY.



800.352.6931  
[IndexFresh.com](http://IndexFresh.com)