GreenSheet
CALIFORNIA AVOCADO INDUSTRY NEWS

Volume 37 I Issue 5 I March 1, 2021

IN THIS ISSUE, YOU'LL FIND:

Calendar

For a listing of industry events and dates for the coming year, please visit:
http://www.californiaavocadogrowers.com/commission/industry-calendar

CAC Finance Committee Web/Teleconference

March 4

March 4
Time: 9:00am – 9:55am
Location: Web/Teleconference

CAC Board Web/Teleconference Meeting

March 4

March 4
Time: 10:00am – 12:30pm
Location: Web/Teleconference

Nominations for Hass Avocado Board Now Open

The Hass Avocado Board, comprised of 12 members, is now accepting nominations. HAB plays an important role in promoting consumption of Hass avocados across the United States. HAB board members attend four meetings a year and by sharing their expertise play an important decision-making role concerning HAB policies, research, promotional programs and direction. The term for new members and alternates begins November 1, 2021, with those newly elected being officially seated at the board meeting on December 1, 2021.

HAB mailed board nomination announcements to all eligible producers and importers on March 1. The timeline for the remainder of the process is as follows:

- March 30 — Deadline for receipt of nomination forms

- April 26 — Ballots mailed to producers and importers
- May 24 — Deadline for receipt of ballots
- June 7 — Nominations results announced by board with two nominees for each position in industry preference provided for consideration to the USDA Secretary of Agriculture

Complete information is provided on the HAB website.

CAC Releases Updated 2021 Crop Volume and Harvest Projections

In December 2020 CAC staff conducted a survey of AMRIC Handlers requesting crop volume and harvest timing projections for the 2021 crop year. The results of those surveys yielded a total crop volume of 317 million pounds, all varieties, with projections of April through July for peak harvest volumes. Due to weather events occurring in December 2020 and January 2021, CAC conducted a second pre-season survey in mid-February to ascertain the impact to crop volume and harvest projections. The February 2021 survey resulted in a reduction of 25 million pounds to the Hass crop, bringing the pre-season estimate to 292 million pounds for all varieties. Despite this eight-percent reduction in crop volume, due to a later start to the season than originally anticipated, there is minimal impact expected to the peak California avocado season of April through July and even into August.

While early-season crop harvest was minimal in January and early-February, stabilizing market conditions have led to increased California harvest over the last two weeks. As of week ending 2/21/2021 calendar year-to-date harvest totaled three million pounds, with half of that volume picked during week ending 2/21/2021. It is estimated another 3.5 million pounds were harvested the last week of February, leaving about 286 million pounds to be harvested from March through October. The updated 2021 crop projections indicate peak California season has remained unchanged from the December 2020 projections, with promotable harvest expected April through August.

CAC will conduct the mid-season grower crop survey, as well as AMRIC Handler survey, in April 2021 to get an update on total crop volume and make any necessary adjustments to weekly harvest projections. The results of these surveys will be available in May 2021.

COVID Vaccines Available for Agricultural Workers in San Diego County

San Diego County has announced COVID vaccines will be available for the Food and Agricultural Sector beginning Saturday, February 27, 2021.

The San Diego County Farm Bureau is working closely with Supervisor Fletcher's Office, CalFire and the Department of Public Health to distribute vaccines quickly to the farming community. To that end, CalFire will establish multiple rural farm sites across the county dedicated to vaccinating members of the agricultural workforce. The California Avocado Commission will provide additional information concerning these sites once it becomes available.

For those with private insurance, you are encouraged to contact your physician immediately to determine if they are distributing vaccines and to make an appointment. If you do not have private health insurance, appointments can be scheduled via the County's website 2-1-1 beginning Saturday. Long delays are expected when trying to schedule appointments.

To verify you are eligible to receive a vaccine under the agricultural sector, bring one of the documents listed below. Please note that the Farm Bureau is aware that a significant portion of San Diego County growers may not be able to furnish these documents and so are advocating for additional solutions. We are hopeful this list of documents will be expanded in the future to be more favorable to producers.

- An employee ID card
- A paycheck stub or timesheet issued within the last 90 days
- A letter on employer/company letterhead stating your name and employment status — permanent, probationary or temporary
- A field worker training card
- Copy of agricultural permit with employee name

New Website Provides Employers with COVID-19 Compliance Assistance

The California Department of Industrial Relations and the Labor and Workforce Development Agency have launched a "Safer at Work" website that contains comprehensive COVID-19-related resources for employers.

One of the key features of the site is the "COVID-19 Employer Portal." Upon entering their business type, county of operation and indicating what compliance practices an organization has in place employers will be provided with COVID guidance and resources specific to their business.

The site also provides information concerning:

- COVID training and resources
- Cal/OSHA's emergency temporary standards
- What to do if an employee is sick, or has been exposed to, COVID
- How to identify COVID symptoms
- COVID testing
- Contact information for Cal/OSHA, the Labor Commissioner's Office and workers' compensation and sick leave information lines

How Textural Stratification of Soil Impacts Irrigation

As we approach the bloom season in California avocado groves, it's important to take action to leach the salts from grove soils. Because this past winter has been low in rain, and California avocado growing regions have experienced high winds and heat the groves will be particularly vulnerable to salt damage.

Salination of the soil can be caused by:

- Evaporating rainfall or irrigation water — avocado trees do not utilize the salt in the water, thus salt accumulates in the soil
- Chloride-based fertilizers
- Some mulches and manures
- Water logging from irrigation, that brings salt to shallow soil depths

To effectively leach salt from grove soils, it's important to understand how soil types affect water movement. Water moves fastest through coarse textures (sand) and slowest through finer textures (clays). If grove soils have textural stratification — layers of soil that are substantially different in textural class than the layer above — this can effect the movement of water.

A Walla Walla Community College video illustrates how this works. If you have a layer of fine soil with coarse soil below, as you water the grove the wetting front (where soil beings to move into the soil and also where salts tend to accumulate) moves laterally and downward. It can be pictured as a half circle of water moving downward and outward in the soil. As that wetting front meets a coarse layer of soil below it (which has a greater hydraulic conductivity), one would expect the water to rapidly disperse into the coarse soil. However, that is not what happens. Coarse soils have large particles surrounded by large pockets of trapped air — it is the pressure from this trapped air that prevents the water from moving downward into the coarse soil. Thus, the wetting front expands outward and builds up in the loamy top layer of soil until enough pressure builds up from the excess water in the upper layer to overcome the air resistance of the lower soil layer and push down through the coarser texture.

If grove soils are comprised of loam (medium soil) above clay (fine soil), you also see a slower movement of water. However, this is due to the low hydraulic conductivity of clay, which simply can't transmit water fast enough.

To ensure salts are leached from the soil, it's important to remember the top six inches of avocado grove soil are the most important to manage for salinity as avocado trees have a shallow root system. Salinity management best practices include:

- Avoid short, frequent irrigation cycles, as salts are not leached
- Avoid prolonged saturated soils, or standing water, that leads to root rot
- Optimal irrigation requires uniform water application and mass, in a large, low-EC zone, under trees
- Drip irrigation is not ideal for managing salinity in hot, dry weather, as it only supports roots in a narrow zone of low EC soil
- Soil water of about 4 EC, or TDS of 2000, is too salty, as water will leave roots
- Effective leaching requires monitoring soil water to determine irrigation volume and duration
- Generally aim to use a 10-20% leaching fraction at each irrigation, to maintain a root-zone salinity of soil water below EC 2
- Leaching fraction is the amount of additional irrigation water needed to maintain the correct salinity; this, however, depends on salt levels in irrigation water
- Bumping is the technique whereby an irrigation is stopped and then restarted in order to improve leaching and reduce runoff

If you use two sources of water when bumping, use the poorer quality water first, then use the better quality water when your restart the irrigation

For more information visit:

- Avocado Grove Soil Salinity 101

- Irrigation and Salinity Glossary of Terms
- Avocado Grove Salinity Management Best Practices
- Measuring Avocado Grove Salinity
- Identifying Salinity Problems in California Avocado Groves

Spring Is Ideal For ProGibb LV Plus® Application

ProGibb LV Plus® (gibberellic acid; GA) —a low volatile organic compound formulation designed to increase avocado fruit size and yield — is approved for use on avocado, including in certified organic orchards. According to the California Avocado Commission's March 2020 grower survey, which examined growers' experience with using GA, an increasing number of growers are using GA and to date no users have reported any negative effects of GA application.

Because spring is the ideal time to apply ProGibb LV Plus®, we are sharing application best practices.

Timing

- Apply the foliar spray during the cauliflower stage of inflorescence development, when 50 percent of the inflorescences on 50 percent of the bloom is at this stage
- If you are unable to time the application as noted above, it is better to make a slightly late application as it will have better efficacy than an application that is too early
- Do not apply when the majority of trees are in full bloom as the applications will be ineffective

Spray Volume and Dilution

- The maximum allowable dose is 25 g active ingredient/acre for all modes of application; doses above or below this are not effective
- If applied like a pesticide spray, focus on spraying the developing inflorescences and avoid run-off
- For ground applications, use 12.5 fluid ounces of ProGibb LV Plus® in a spray volume of 100 gallons of water/acre and avoid run-off
- For aerial applications, use 12.5 fluid ounces of ProGibb LV Plus® in 75 gallons of water/acre

Spray Solution pH

- The ideal final pH of the spray solution is 5.5 – 6.0, thus the pH of water should be adjusted accordingly

Wetting Agent

- Widespread Max® or Silwett L-77® at a final concentration of 0.05 percent is ideal as a wetting agent; similar organosilicone type surfactants can be used as well

Grower Experiences with GA

According to the Commission's GA grower survey, growers who did not utilize GA cited their uncertainty about whether it could be used for organic production as the primary reason. It is important to reiterate ProGibb LV Plus® is National Organic Program compliant and is registered with the Organic Materials Review Institute.

From 2018 – 2020, the majority of California avocado grower GA applications were aerial, while the remaining one-third of growers applied GA by ground. For those making ground applications, all respondents used 100 gallons per acre spray volume in 2018 and 2019, and 20% said they used less than 100 gallons in 2020.

Twenty percent of users have tank mixed something other than the recommended surfactant with GA in each of the three years. Boron, phosphites, and micronutrients (manganese, zinc and iron) are the commonly reported tank mixes. It should be noted the use of boron in combination with GA is not recommended on a large scale because both GA and boron are bloom/fruit set enhancers and it is unknown if they work synergistically or antagonistically.

In 2018, about 60% of users reported leaving some trees untreated for comparison, but in 2019 and 2020 only 40% reported leaving untreated trees. It is always best practice to leave some trees untreated for comparison so you can determine whether the product is effective under your treatment conditions. It also is a precautionary step in the event something should go wrong with the application.

For those who applied GA in 2018, 40% reported a yield increase and 60% reported the yield remained the same at harvest in 2019. However, for 2019 applications, 60% reported a yield increase and only 40% reported that yields stayed the same. In 2018, some applications may have been made too late because the SLN registration was not available until the end of March. Increased fruit size was reported by about 50% of users following both the 2018 and 2019 applications.

The majority of users (86%) reported satisfaction with GA and plan to continue using it on their groves. For those who were not satisfied with the results, the lack of a response and the difficulty of application timing were cited as the reasons.

For more complete information concerning ProGibb LV Plus®, read "ProGibb LV Plus® Plant Growth Regulation to Increase Fruit Size and Yield of Avocados" in the Summer 2018 issue of From the Grove or "Application Instructions for ProGibb LV Plus® Plant Growth Regulator" in the Spring 2019 issue of From the Grove.

Point-of-Sale Data Reveals Marketing Program's Success in Building Demand for Avocados

Over the past several years, the California Avocado Commission has utilized its Tiered Account Program to maximize sales while monitoring and measuring the sales performance of avocados across the nation, in targeted regions, within markets and at retail chains. Using both AMRIC and retail point-of-purchase sales data, the Commission can fine tune its marketing programs, share detailed sales information with retail partners that encourages them to stock and promote the fruit throughout the season, and study the season's overall performance in detail.

By examining IRI retail sales data from California — actual cash register scanner data from reporting retail grocery chains in the state — the Commission can review the results of the 2020 California avocado season in the region where most of its marketing resources are employed. Following are highlights based on this data.

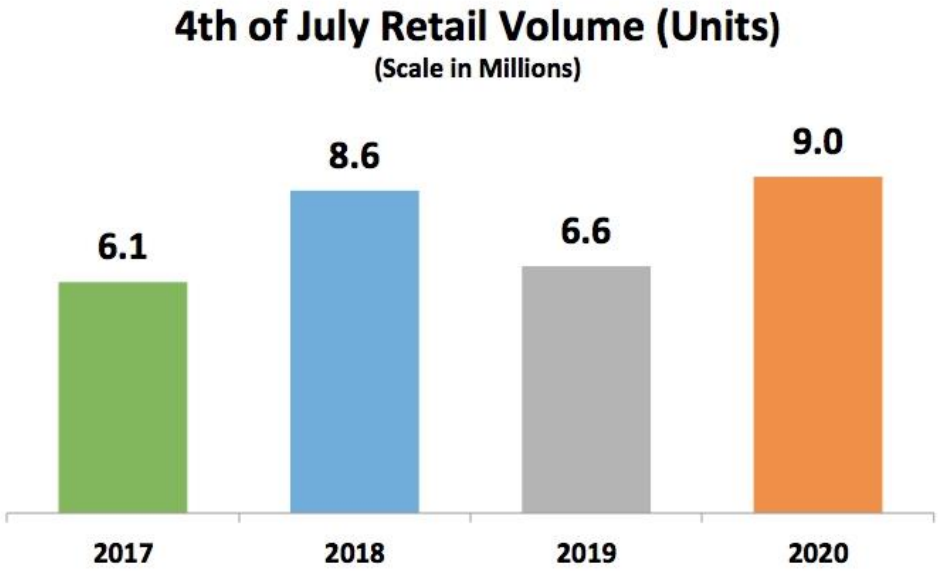
According to the data, the 2020 season weekly dollar sales increased by 10% over the prior season and volume was even higher with a 28% increase from 2019. Overall, retail sales at reporting retailers for the entire 2020 season hit $270 million and 214 million units. In comparison, the entire 2019 season reported $208 million in retail sales with 184 million units.

The data also reveals the allure of the California avocado season remains strong. The 2020 California avocado season exhibited a 23% increase in category volume versus the 2020 non-season. This equates to nearly 1.8 million more units

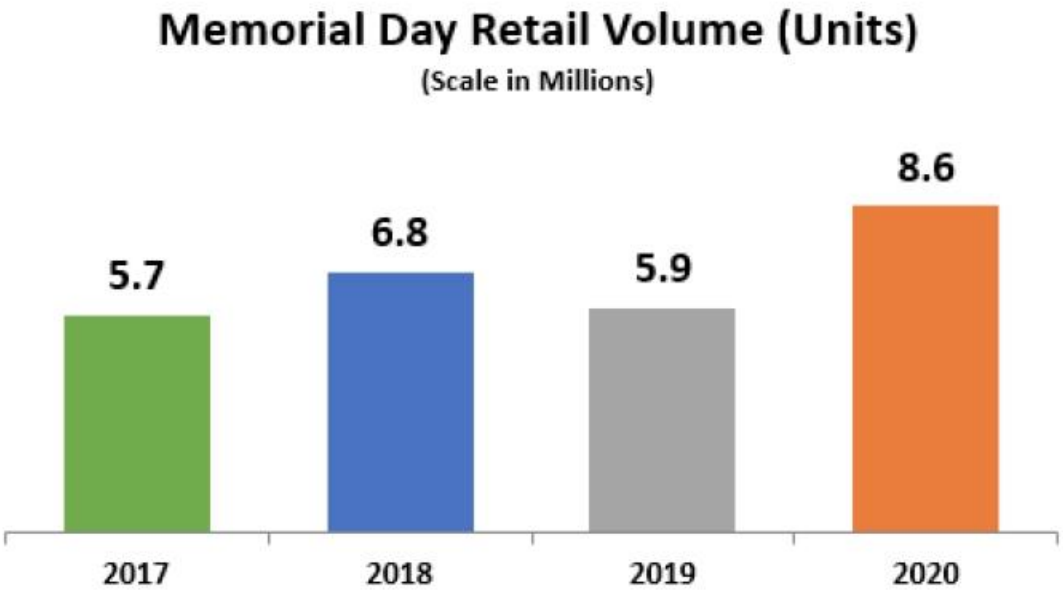
sold every week during the California avocado season. Dollar sales also increased with $987,000 more retail dollar sales each week on average during the California avocado season (a 33% increase). Shoppers also demonstrated they were willing to pay 8% more during the California avocado season with an average in-season retail price of $1.26 as compared to $1.17 in the non-California season.

During the early 2020 season, as the state of California put into place stay-at-home orders, avocado sales spiked with more than $11 million in sales during the week ending March 15. This represented a 36% boost in dollar sales over the same time in 2019.

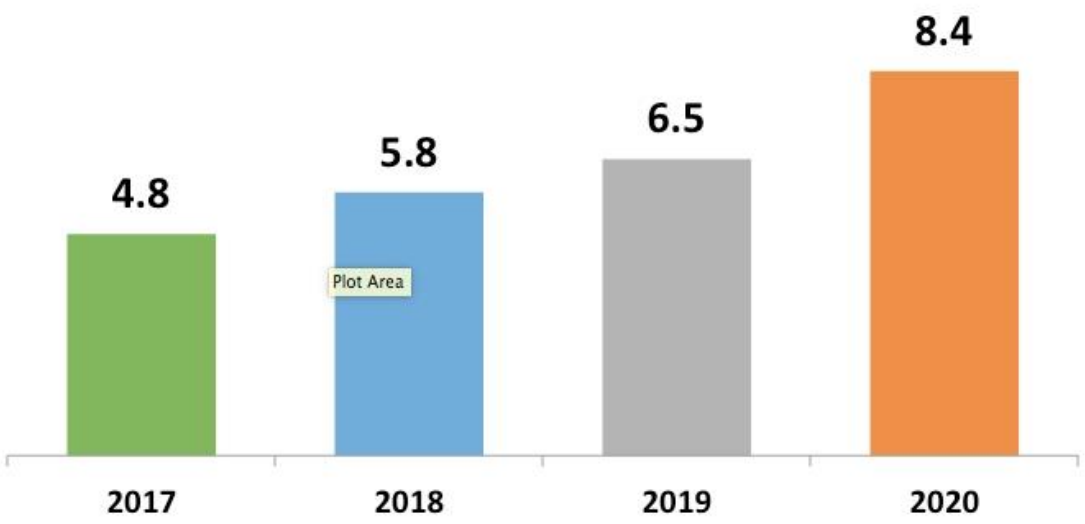
Summer holiday events also sparked increases in retail dollar sales with the highest occurring during the 4th of July, Memorial Day and Labor Day.



In comparing past 4th of July holiday volume, 2020 produced a 36% and 45% increase over 2019 and 2017 respectively.



Memorial Day retail volume sales in 2020 were 46% greater than in 2019 and 50% greater than in 2017.



Labor Day retail volume in 2020 also outpaced previous years with a 30% increase over 2019 and a 74% increase since 2017.

"The results of the past season are a reflection of the Commission's strategies and programs," noted Jan DeLyser, CAC vice president marketing. "Our integrated approach of working directly with handlers, reaching out to retailers and foodservice operators, and providing marketing programs, materials and tools (consumer and trade all help to build increasing demand for California avocados." Even as the volume of avocados increased within the state, a key target for California avocado distribution, consumer demand continued to outpace supply with California retail prices increasing while prices across the rest of the nation declined. In fact, the average retail sales price of avocados in California this year was 17% higher than the rest of the country — reflecting a retail price differential that has been increasing since 2016. As seen below, the compound annual growth rate of the retail sales price of avocados in California continues to outpace the rest of the country.

Source: IRI/FreshLook California Region and Total U.S. excluding California – Mar-Aug 2020
*CAGR = Compound Annual Growth Rate. This is the average annual growth rate of retail ASP since 2014

These positive retail volume and price results did not go unnoticed by the Commission's retail partners — 100% of CAC's tracked Tier 1 accounts carried California avocados during 2020. The graphic below demonstrates the high level of engagement and subsequent success experienced by the Commission's tracked Tier 1 retail partners.

California Market Trends

To view all market trend graphs, including "Weekly Volume Summary," "Weekly Avocado Prices" and "U.S. Avocado Supply," please visit: http://www.californiaavocadogrowers.com/industry/market-statistics.

California Avocado Society Weekly Newsline* Avocado Prices – February 23, 2021

	Conventional #1	Organic #1
California Hass	(Field Price Per Lb)	(Field Price Per Lb)
#32's		
36's		
40's		
48's	Insufficient Volume to Quote	
60's		
70's		
84's		

*To subscribe to the Weekly Newsline, please contact the California Avocado Society at (949) 940-8869 or www.CaliforniaAvocadoSociety.org.

California Avocado Commission Weekly Volume Summary (Pounds)

	Week Ending 2/21/2021	Season-to-Date (since 11/01/2020)	2021 Year to Date
Hass	1,505,474	9,271,893	2,908,760
Lamb	0	0	0
Other (Greens)	8,280	140,480	104,430
California Total	**1,513,754**	**9,412,373**	**3,013,190**
Florida	0	5,333,240	1,430,000
Chile	0	0	0
Mexico	57,243,057	865,385,847	476,540,629
Peru	0	0	0
Other (Imports)	1,560,000	22,390,000	14,690,000
Import Total	**58,803,057**	**887,775,847**	**491,230,629**
USA Total	**60,316,811**	**902,521,460**	**495,673,819**

Sources:
California = CAC (AMRIC)
Florida = Florida Avocado Admin Committee
Chile = Comite de Paltas, Chile
Mexico = APEAM
Peru = ProHass
Other Imports = USDA AMS website

Crop Statistics

The California Avocado Commission has completed a February 2021 crop estimate and weekly harvest projection update, resulting in an updated crop volume of 292 million pounds, which reflects a 25 million pound reduction in Hass volume (all other varieties remain the same). While the Hass crop volume has been decreased by 8%, due to a later start to the season than originally anticipated, projections show minimal impact to the weekly harvest during the peak season of April through August 2021. While early-season crop harvest was minimal in January and early-February, stabilizing market conditions have led to increased California harvest over the last two weeks. As of week ending 2/21/2021 calendar year-to-date harvest totaled three million pounds, with half of that volume picked during week ending 2/21/2021. It is estimated another 3.5 million pounds were harvested the last week of February, leaving about 286 million pounds to be harvested from March through October. As growers prepare for the start of the season, the Commission recommends that they communicate with their handlers and grove managers on a regular basis to plan their harvest strategy.

2021 California Crop Weekly Harvest Projection Weekly Crop Movement vs. Distribution Projections All Varieties				
	4-Year Historical Forecast	AMRIC Handler Forecast	Industry Adjusted	
Week Ending (CAC Week)	Feb 2021 Update	Feb 2021 Update	AMRIC Harvest	AMRIC Shipments
Jan 10 - (10)	59,300	18,400	8,096	38,858
Jan 17 - (11)	374,500	151,100	10,120	40,143
Jan 24 - (12)	628,400	234,300	433,768	436,739
Jan 31 - (13)	1,564,900	492,600	244,858	52,300
Feb 7 - (14)	1,991,800	998,000	245,876	182,567
Feb 14 - (15)	1,594,600	760,100	557,454	234,182
Feb 21 - (16)	1,837,000	864,400	1,513,754	482,776
Feb 28 - (17)	3,256,600	1,540,800	-	-
Mar 7 - (18)	4,301,000	4,864,700	-	-
Mar 14 - (19)	5,419,100	6,131,000	-	-
Mar 21 - (20)	5,998,500	6,786,500	-	-
Mar 28 - (21)	3,786,700	4,285,100	-	-
1st QTR SubTotal	**30,812,400**	**27,127,000**	**3,013,925**	**1,467,565**
2nd QTR SubTotal	**151,962,700**	**154,487,600**	**-**	**-**
3rd QTR SubTotal	**96,559,900**	**104,994,700**	**-**	**-**
4th QTR SubTotal	**12,665,000**	**5,390,700**	**-**	**-**
Season-to-Date	8,050,500	3,518,900	3,013,925	1,467,565
% of Crop	2%	2%	1%	1%
Crop Size	**292,000,000**	**292,000,000**	**Left to Harvest**	**Left to Ship**
Crop Variance	(5,036,575)	(504,975)	288,986,075	290,532,435

Weather: 30-Day Outlook For California's Coastal & Valley Areas

(February 26 – March 29)

Summary- A *La Niña* pattern is expected to continue in March through August. The North American Multi-Model-Ensemble (NMME) shows *La Niña* near maximum intensity in July and August. The best chance for near normal precipitation in California is in late Mar and early Apr in NW California, followed by a warm and dry mid to late spring, Apr-May.

Activity of Fronts – A tendency for troughing will continue in Mar in the central Pacific north of Hawaii. This will keep a longwave trough and cold conditions through most of Mar in California. A cold Mar in California suggests above normal incidence of late season frosts. This applies to NW California viticultural areas, the central coastal valleys, and S California.

Precipitation Trend – Below normal precipitation is expected in the last half of Feb, while near or above normal rainfall occurs in Mar for N California, Bay Area and north. Below normal rainfall and warmer than normal conditions occur in April for S California.

It is cold and showery at times in S California during mid to late Mar and early in Apr. The drivers for below cold conditions with below normal rainfall in SOCAL include continued tendency for cyclogenesis in the mid North Pacific per SSTA contributions), and downstream tendency for recurrent high pressure near the coast at 130W, and cold troughing over the Great Basin, Sierras, Arizona, and at times into S California.

Current Most Likely NORCAL Precipitation Dates (from our CFSDaily products out 30 days): Dates of larger precipitation systems in N and central California and Sierras: Mar 5-6, 12, 17-18, 20-23. 25-28.

In S California - Most Likely Precipitation Dates: A drier pattern is expected for southern California although a few showers are possible: Mar 4-5, 11, 17-18, 26-29, and 31 in E Deserts.

SOCAL Warm Spells, and Freezes from our CFSDailyAI - Freezes and wetbulb freezes (wetbulb temperature below 32), often occur in cold Santa Ana events. Hard freezes (ambient air temperature 29 or lower) can occur on dry clear nights if wind speeds decrease to calm in valley areas overnight.

SOCAL frost dates from models GFS and CFSDailyAI: Feb 28, Mar 1-2, Mar 2, 11-12. SOCAL warm to hot spells: coast Orange-Riverside Co's and San Diego Co: Mar 6, 22-23.

Central Sierra Nevada best chance for Precipitation: Mar 11, 14,17-18, 26-29, and 31.

Freezes in north and northcentral California valley cold spots: Feb 28, Mar 2-3, Mar 7-16, 18, 23-24, 31.

La Niña seasons are not favorable for subtropical jet formation, or significant rains into SOCAL. However, some cutoff upper lows may develop 20 Mar onward for central and southcentral California, resulting in some rains due to above normal sea surface temperatures W of California over a large area 125-140W.

The listing of dates normally included for for hot and cold spells, and precipitation are based on our CFSDaily and CFSDailyAI forecast products, and present generally expected trends in precipitation (both products) and temperature (CFSDailyAI) to 4km. Our system gives some consideration of terrain and coastal influence. We consider the CFSv2 as one of the better ways to represent basic weather down in the sub-monthly time scale beyond the 15 day GFS or monthly maps from CFSv2 or NMME.

..Southern California Deserts Outlook for Feb 28 - Mar 29: Highlights: Possible widespread rain event Mar 4-early 6 spreading through Arizona.

Eastern deserts show dry conditions with warmer than normal Light showers are possible Mar 11-12, and Mar 27-31.

*****Looking Ahead – Long Range Outlook Mar 30- Apr 30 with comments for May*****

Warmer and drier than normal overall especially for southern California. Some near normal precipitation is possible northwest California with the best chances of rain from Mendocino County north. Frosts and light freezes are possible across NW and N California valleys. Best chance for northern California frosts and freezes will be on Mar 26, 27, and Apr 3-5. Occasional troughs in mid to late April will be followed by a chance of frost and some freezes in Mendocino, Lake and Napa Co's.

With the occasional late season trough in early to mid May could be followed by a frost or freeze, occurring during the spring bloom to early fruit-set period.

…Mar 26-Apr 26 2021 N and Central California…

The currently well defined *La Niña* will weaken during this period (April). There may continue occasional cold troughs and showers south through central California, with low snow levels around the beginning of April. The La Nina condition generally supports weak westerlies in the southern storm track off south central and S California through this early to mid spring period. Continued rain/snow periods or possibly above normal precipitation in N California and Pacific Northwest states (Washington and Oregon. Warmer and drier than normal conditions are indicated for central and S California. Usual cold fronts occur in April with a few rain showers, and some snow for the central Sierras. 30-Day temperature guidance for April and May suggest warmer and drier than normal conditions continuing in May. Watch for early season dry and hot spells developing in May (well above normal temperatures) to start the long summer fire season in northern and central California.

For SOCAL: in March…even with the up-tick in precipitation, it will be difficult to recover from the currently large rainfall and moisture deficit.

Although we realize some nice snowstorms during March in the central Sierra, the early onset of recurrent, dry windy cold fronts in April followed by warmer than normal in May and June suggest an early and potentially robust start to the 2021 fire season.

April-May-June 2021… are still indicated drier than normal in the current CFSv2 model simulation.

Alan Fox...Fox Weather, LLC