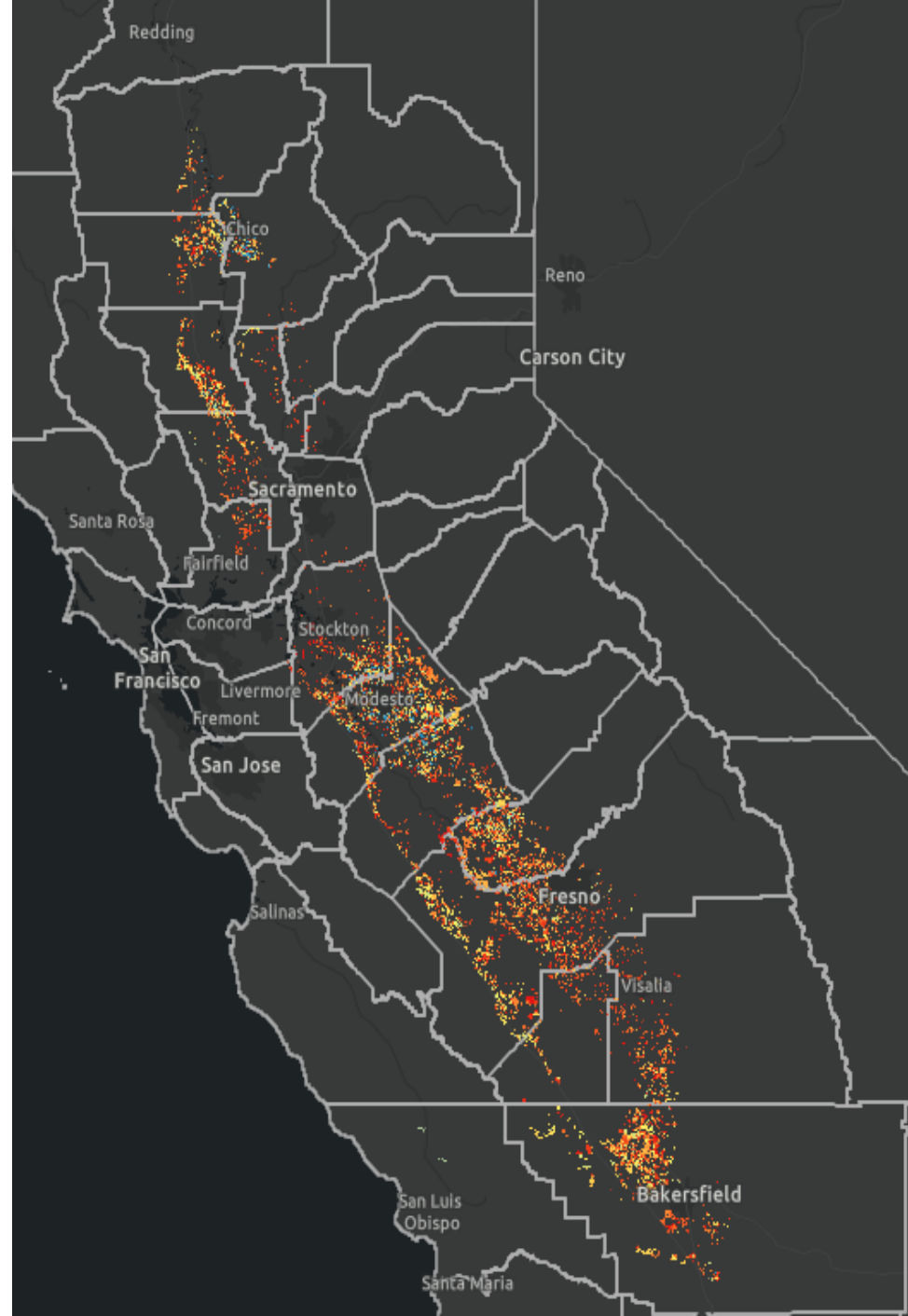


2023 State Almond Crop Estimate

Presented by

the Wonderful company



WP&A/Famoso Nut/Ag-Wise

2022 Almond Crop Estimate In Review

With the publication of the March 2023 ABC Position Report, we can now see where the 2022 California almond crop will finalize at with much greater certainty. With USDA receipts totaling 2.55 billion pounds, we now see this crop finalizing around 2.56 billion pounds.

As you can see from the chart below, our estimate for the 2022 State Almond crop was a miss on the high side by 9.6% overall. Our Northern Region estimate was very accurate (within 1%) but we over-estimated the Central and Southern regions by 9.2% and 11.5% respectfully. Why we over-estimated those regions is not fully understood. It is probably the fact that the shortage of water and very hot summer temperatures must have had a much bigger impact on the final yields than what we could have anticipated. We could clearly see the Northern region was hit hard by the frost and as we moved southward from the Sacramento region, the nut sets continued to look better and better. In fact, based on visual observations, it took a lot of thought and debate to not move our figure even higher. Hopefully for our 2023 Estimate we fall back in line with our historical accuracy as seen on the last page of this report. **But if we are off on our estimate for 2023, my guess is we will again be too high which happens when you have a crop is this variable with so many negative factors in play as noted in following pages.**

2022 WP&A/Famoso/Ag-Wise California Almond Crop Estimate vs. Final Outlook

Growing Region	CY 22 Crop Receipt Outlook Yield/Acre by Region - as of 5/7/23			CY 22 WP&A Estimate Yield/Acre by Region - as of 5/11/22			2022 Estimate vs. 2022 Outlook More/(Less)			
	CY22 Bearing Acreage	Yield/ Acre	Receipts based on BOY Assumptions	CY22 Bearing Acreage	Yield/ Acre	Receipts based on BOY Assumptions	Total Receipts			
							Acres	Yld/Acre	In Lbs.	In %
Northern	242,775	872	211,793,486	235,902	907	213,859,856	(6,873)	34	2,066,370	1.0%
Central	547,536	2,111	1,156,040,255	541,572	2,330	1,261,943,129	(5,964)	219	105,902,874	9.2%
Southern	552,613	2,157	1,192,121,787	562,526	2,363	1,329,241,743	9,913	206	137,119,956	11.5%
Total/Average:	1,342,924	1,906	2,559,955,528	1,340,000	2,093	2,805,044,728	(2,924)	187	245,089,200	9.6%

Note: Note that all Acreage & Yield/acre are based on Land IQ Data as of 11/25/22

Red Font = Under-estimated
Black Font = Over-estimated

2023 California Almond Crop Evaluation & Estimate

– as of 5/7/23

The following pages summarize the results of our 2023 State Almond Crop Estimate. This year we had twelve people in four vehicles that were able to visually inspect all the major growing regions in the state with an additional two estimators who only visually toured the southern region of the state. The group was again made up of mostly Crop Managers, PCA's, and Irrigation Managers along with three Sales/Operations Managers. As we have done in the past, we also spoke with local area farmers, handlers and PCA's in each area to obtain first-hand knowledge of what they thought their crops looked like this year vs. the crop they had in 2022. We divided each of the regions (North, Central, South) into four zones with each vehicle spending about 7-8 hours in their assigned zone each day. We started our tour on May 1st this year and looked at orchards for 3 full days in all growing regions north of Kern County. Prior to this trip, we had made our own assessments of the Kern county orchards where most of our own orchards are located. The total combined miles covered by our group equated to more than 4,000 road miles (about 1,000 road miles/vehicle).

As we do every year, all members were provided with historical data as to crop receipts by county and region, as well as historical yield/acre estimates based on either Land IQ acreage (2010 to 2022...with the odd years during this period between 2010 - 2017 being extrapolated using the variance seen between Land IQ acreage and NASS acreage for the even year's). Normally all estimators in our group use the current Land IQ estimated bearing acres (their initial estimate in April 2023 is 1,366,362). However, based on the many orchards we saw this year that were showing on the current Land IQ maps as bearing yet did not exist (were 100% removed), others that were pushed but not removed, and a lot of acres that were fully abandoned yet still standing; the bearing acreage used varied by estimator (average of all was 1,357,500 bearing with no estimator higher than Land IQ bearing acreage). The acreage of 3rd leaf orchards (2021 plantings) we have estimated at about 52,000 acres and their production is incorporated in our estimates per normal. You can find the latest Land IQ Almond Acreage Report at the link shown below.

<https://www.almonds.com/tools-and-resources/crop-reports/standing-acreage-final-reports>

2023 California Almond Crop Evaluation & Estimate

– as of 5/7/23

In addition to the data provided above, each team member was given three different models (Excel worksheet tools) in which to develop their individual estimates (by tree age, by region, and by county or any combination of these three tools). As always, we had a 3rd Party expert in statistics and regression analysis review the individual estimates and determine the best figure to use for our “official group estimate”. The final “official” estimate is weighted on group members with a consistent record of estimate accuracy.

General Observations for the Northern Region (Sacramento to Tehama)

Visual observations for the Northern Region included, Yolo, Colusa, Butte, Tehama, Glenn, Placer, Sutter, and Solano Counties. This region escaped any major hard freeze days during bloom and post-bloom unlike the devastating freeze seen last year that dropped their production by -46% vs. the 2021 season. However, this region along with all growing regions suffered some of the worst bloom weather we have had in over 20 years (much colder and wetter than normal with plenty of wind from February 14th – March 10th). This resulted in some of the lowest bee flight hours we have measured going all the way back to crop year 2000 (see chart on page 13 of this report). In addition, the post-bloom weather statewide was equally poor with March ending up as the 5th coldest and 7th wettest March over the past 129 years of record. If you look at the 3-month period of February – April 2023, for California it was 16th coldest and 26th wettest period in the past 129 years of record keeping (see pages 14 & 15 of this report).

As a result of the very poor bloom and post-bloom weather conditions, the recovery back to more normal yields was not fully realized based on what we saw on this trip. We saw a mix of good, average, and bad nut sets within the northern region with the Tehama County orchards (North of Orland) and the Arbuckle areas showing the best movement back towards historically good crops. All orchards looked better for the most part than last year, but we still saw many orchards with nut loads that were less than 1,200 lbs./acre. This region (especially the area south of Chico) still has a lot of very old orchards that are missing a lot of trees and/or have five to eight different ages of replants that are small trees with very small nut sets.

2023 California Almond Crop Evaluation & Estimate

– as of 5/7/23

General Observations for the Northern Region (Sacramento to Tehama) - continued

The older trees have limited canopies where the only nut sets are along eight to ten main limbs. The combination of all these factors brings the yield per acre down in these types of orchards which is the reason why this region routinely has lighter overall yield's each year vs. acreage located south of Sacramento.

One interesting observation from our group for the Northern Region was that the orchards we came across that were being farmed well and in their prime producing years and that had more normal full canopies had some of the lighter nut sets/tree than some of older orchards that looked less healthy. These orchards from a distance looked good but once you pulled up to them and walked within the orchard, the nut sets were routinely very light. We are not sure why that was so often the case. Our overall average for the northern region improved by more than 330 lbs./acre vs. last year but remained on the low side for this region.

General Observations for the Central Region (San Joaquin County to the North down through Madera County in the South)

The Central growing region is probably the biggest contributor to lower statewide average crop size having a lot of inconsistency from area to area, orchard to orchard, and tree to tree. Just like we observed in the Northern Region, there were specific areas with orchards that had consistently good nut sets (Patterson area down through Los Banos along the I-5 corridor, orchards around the town of Firebaugh) and South of Madera (along Avenue 7/East of Road 23). But many areas we toured in the central region had some of the most inconsistent and light nut sets we can remember ever seeing (East of Hwy 99 from Linden in the North and all the way down to Fresno). The normally high yielding orchards in the area from Oakdale down through Merced including Waterford and Keyes Road were the most inconsistent with a lot of lighter nut sets than good nuts sets. Our observers felt this was due to a combination of many factors including the poor weather,

2023 California Almond Crop Evaluation & Estimate

– as of 5/7/23

General Observations for the Central Region (San Joaquin County to the North down through Madera County in the South) -Continued

water stressed trees at the end of last harvest, a lot of noticeable Bacterial Blast, and sadly a lot of pull back on farming inputs due to highly negative grower returns that are a result from the low almond prices the past 24 months (especially the past 12 months). The Chowchilla area (which my vehicle covered) had some of the lightest average nut sets I saw during this year's tour. From Road 16 and eastward, most of the orchards we looked at had very light nut sets and the further East we drove, the worse it seemed to get. Once we got past the Women's correctional facility on Avenue 24, we started seeing a lot of abandoned orchards with a lot of fallen trees and high weeds throughout the orchards. Even though some of the standing trees that were somewhat healthy in these orchards had good nut sets, the orchards were such a mess that our farming team member felt there would be no economical way to clean these orchard up to a point where the good trees could be further farmed or harvested. We came across a lot of acreage in the Central Region that also looked like hail was probably a factor in the lower nut sets we found, as the trees looked healthy and were being farmed properly but there were just not many nuts in the trees. We felt this Central Region (Madera County to Sacramento) would be off the most vs. 2022 averaging around 430 lbs./acre less than seen in 2022 and down significantly from 2021. This has a big impact on the overall crop for 2023 due to the large number of producing acres in this region that historically have strong nut sets.

General Observations for the Southern Region (Fresno South)

All growing areas from Northern Fresno County southward continued the pattern of inconsistency that we had seen in the other areas. Although many good orchards with good nut sets could be found, even those with good nut sets seemed noticeably lighter than the strong nut sets we saw last year. There were not as many light nut sets found in this region as we saw in the Central Region. The exceptions were the highly

2023 California Almond Crop Evaluation & Estimate

– as of 5/7/23

General Observations for the Southern Region (Fresno South) - Continued

water stressed orchards we saw at the end of last year's harvest that are still standing west of Delano, Wasco, and Shafter as well as those up the I-5 corridor from Kettleman City up to the Fresno county line (which in fact makes up a lot of bearing acres for this region). The rule in this region seemed to be if the orchards were being farmed well (no cutbacks on inputs) and were not severely water stressed at the end of harvest last year, good nuts set were generally found. However, even these better nut-set orchards seemed a bit lighter than what we saw on our tour last year. This region has a lot of acreage showing as bearing on the new Land IQ maps that are either fully removed, in the process of being removed, or obviously not being farmed any longer but are standing. We feel the standing bearing acre figure in this region is well overstated.

This region fooled us last year and was one the of main reasons why we over-estimated the 2022 crop. Everything seemed to have above average nut sets yet in the end, came up 11.5% (137 million pounds) short of our estimate. So, if we felt that even the good nut set orchards were off a bit vs. last year, we expect the better orchards in the region will not off-set the amount of lighter nut set orchards we saw or the large amount of acreage that is no longer being farmed (removed, being removed, or abandoned). Thus, we have the Southern Region down vs. last year by 230-260 lbs./acre and of course significantly down from the 2021 crop that was set in perfect bloom conditions and before the drought impact became so extreme in crop year 2022.

One other very noticeable change this year was the lack of new plantings vs. what we have seen in the past (especially in the southern region). But all areas were down in new plants which supports the lower figures we have seen in the NASS Nursery Survey the past few years. The drought of course played a part in this lower planting pattern, but reality is the historically low prices the past two years along with the large increase in growing costs has made planting more almonds a very unattractive financial investment.

2023 California Almond Crop Evaluation & Estimate

– as of 5/7/23

Other General Observations from our Tour

Nut Size and Maturity – Throughout our tour, we of course spent a lot of time in the orchards looking at nut size and nut maturity. In terms of nut maturity, all nuts we cut open (north to south) were still fully in the gel stage of development. Our own growers as well others we spoke with in each region felt the maturity of the crop is behind last year by 10-14 days. Thus, we expect harvest to start even later than last year's later harvest. As for nut size, it just depends on the nut set in each orchard. Lighter nut sets have larger nuts and heavier nut sets have smaller nuts (as is normal). But now that the drought is over and there is plenty of water for growers, we don't feel like nut size shrink will be a factor as seen the prior two drought years. Thus, we expect a return to "normal sizing distribution" across all varieties for the coming season.

Nut Quality & Insect Pressure - We already knew before our trip that excessive mummies were going to be an issue as the wet weather made it impossible for many growers to do their normal orchard sanitation in late December through early February. As we toured the orchards throughout the state, our assumption held true as we saw more mummies in the trees on this tour than ever (even in orchards that are normally mummy free at the time of our tour). We opened a lot of these mummy nuts and found a high percentage contained live navel orange worm larva. We will see how things go as we move into the hot summer months but for sure we know the potential is there to have very high insect pressure from Navel Orange Worm as well as good conditions for the reproduction of stink bugs and other pests that cause insect damage and lost yield in our almond orchards. The question of how much damage will be done is going to be determined by the nut load on the tree, and more so the financial strength of the grower. The Almond prices seen today are still returning cash flow below the cost of production for most growers. With most farming input costs remaining high for "mined" soil amendments, diesel, labor, and weed & pest control products, growers will be looking to cut costs where they can in order to stay solvent. Water and nitrogen costs have dropped for the 2023 season vs. last year. But with the lower yields predicted, the average grower cash cost per pound of last year of \$2.00/lb. will once again be the average level for this 2023 growing season.

2023 California Almond Crop Evaluation & Estimate

– as of 5/7/23

Results and Our 2023 Estimate

The worksheet on the following page reflects the average estimated results by region for our group of 14 estimators. Our weighted regression analysis on the estimates given (based on past accuracy of each individual estimator) resulted in a crop size range as low as 2.1 billion to as high as 2.47 billion pounds with a straight average mid-point of 2.32 billion pounds. After factoring in the historical accuracy of the individual past estimates (estimator's who were the most accurate in 2019, 2021, & 2022), our adjusted figure moved higher to 2.350 billion. Thus, our final adjusted group estimate for the 2022 crop is:

2.350 billion pounds based on 1,357,500 bearing acres (1,731 lbs./bearing acre).

It is important to understand that this smaller crop is not only the result of the bad bloom and post-bloom weather we experienced this year. We have had bad weather during bloom in the past which resulted in overall smaller average yields. However, we have not had a bad weather year like this that was preceded by an exceptional drought year (the worst in over 40 years if not history) as well as a grower returns that have been below the cost of production (way below in 2022) except for the lucky few in good water districts that set very heavy crops the past two years. The combination of all these factors are what has brought our crop yields and overall crop volume estimate down to levels not seen since 2018 despite having many more bearing acres. If grower returns do not improve back to profitable levels soon, the retraction in acreage, the slowdown in new plantings, and the overall production will continue shrink moving forward into the future. The average grower return in 2016 – 2019 with a lower cost of production was \$2.45/lb. (very consistent from year to year). To achieve that return the average raw bulk wholesale price had to average \$2.80/lb. (all varieties and sizes). Prices need to move up significantly from today's level to get back to that \$2.45/lb. average which at today's higher production costs is only a break-even return to the grower at best.

2023 California Almond Crop Evaluation & Estimate by Region - as of 5/7/23

2023 California Crop Outlook Worksheet - By Region as of 5-7-23

	Total Crop			Pollinator Crop			Nonpareil Crop		
	Bearing Acreage	Receipts	Yield/Acre	Bearing Acreage	Receipts	Yield/Acre	Bearing Acreage	Receipts	Yield/Acre
2022 CY - Outlook									
Northern Counties	242,775	211,793,486	872	148,686	119,819,369	806	94,089	91,974,117	978
Central Counties	547,536	1,153,742,755	2,107	335,335	718,453,811	2,142	212,201	435,288,944	2,051
Southern Counties	552,613	1,184,121,787	2,143	338,445	720,115,589	2,128	214,168	464,006,198	2,167
Total:	1,342,923	2,549,658,028	1,899	822,466	1,558,388,769	1,895	520,458	991,269,259	1,905
2023 CY - % up or down vs. 2022 in Yield/Acre									
Northern Counties	5%	56%	49%	5%	60%	53.0%	5%	51%	44.0%
Central Counties	2%	-15%	-16%	2%	-15%	-16.2%	2%	-15%	-16.5%
Southern Counties	-1%	-12%	-11%	-1%	-12%	-11.2%	-2%	-13%	-11.7%
2023 Estimate Results vs. 2022									
Northern Counties	254,174	330,592,948	1,301	155,668	191,931,465	1,233	98,507	138,661,482	1,408
Central Counties	557,457	983,031,318	1,763	341,494	613,121,176	1,795	215,963	369,910,142	1,713
Southern Counties	545,869	1,036,359,272	1,899	335,046	633,039,981	1,889	210,824	403,319,291	1,913
Total:	1,357,500	2,349,983,538	1,731	832,207	1,438,092,622	1,728	525,293	911,890,915	1,736
Total vs. 2022:	1%	-8%	-9%	1%	-8%	-9%	1%	-8%	-9%

 = estimated figures for CY'23 are +/- CY22 avg. Yield/Acre in %

Land IQ Initial Bearing Acreage Comparison by Region for Crop Year 2023

Total Acres by Tree Age by Region							
Northern Counties	20 & Older	16th - 19th	6th-15th	4th-5th	3rd leaf	Bearing Acreage	Total Acreage
Butte	12,172	5,727	11,310	1,817	WP&A Estimate based on Nursery Data	31,026	WP&A Estimate for 3rd Leaf & Older
Colusa/Lake	16,547	12,309	26,109	7,063		62,028	
Glenn	8,471	10,089	25,191	7,836		51,587	
Shasta	-	-	-	-		-	
Solano	1,476	1,067	16,966	3,147		22,656	
Sutter	2,822	1,609	7,234	4,714		16,379	
Tehama	2,703	3,116	10,845	3,304		19,968	
Yolo/Sacramento/Placer	4,172	5,547	30,841	5,887		46,447	
Yuba	107	282	1,431	1,213		3,033	
Regional Total	48,470	39,746	129,927	34,981		20,000	
% within region of Bearing Acres	19.1%	15.7%	51.3%	13.8%		100%	
Percentile within the State	21.4%	18.2%	17.4%	21.0%	38.5%	78%	

Central Counties	20 & Older	16th - 19th	6th-15th	4th-5th	3rd leaf	Bearing Acreage	Total Acreage
Merced/Mariposa	33,898	22,957	67,981	20,539	WP&A Estimate based on Nursery Data	145,375	WP&A Estimate for 3rd Leaf & Older
Alameda	-	-	2,809	2,099		4,908	
Madera	20,982	30,884	79,407	12,968		144,241	
San Joaquin/Contra Costa	16,917	7,895	48,531	19,181		92,524	
Stanislaus	44,633	25,914	89,243	21,200		180,990	
Calaveras	17	-	212	-		229	
Regional Total	116,447	87,650	288,183	75,987		20,000	
% within region of Bearing Acres	20.5%	15.4%	50.7%	13.4%		100%	
Percentile within the State	51.3%	40.1%	38.5%	45.7%	38.5%		

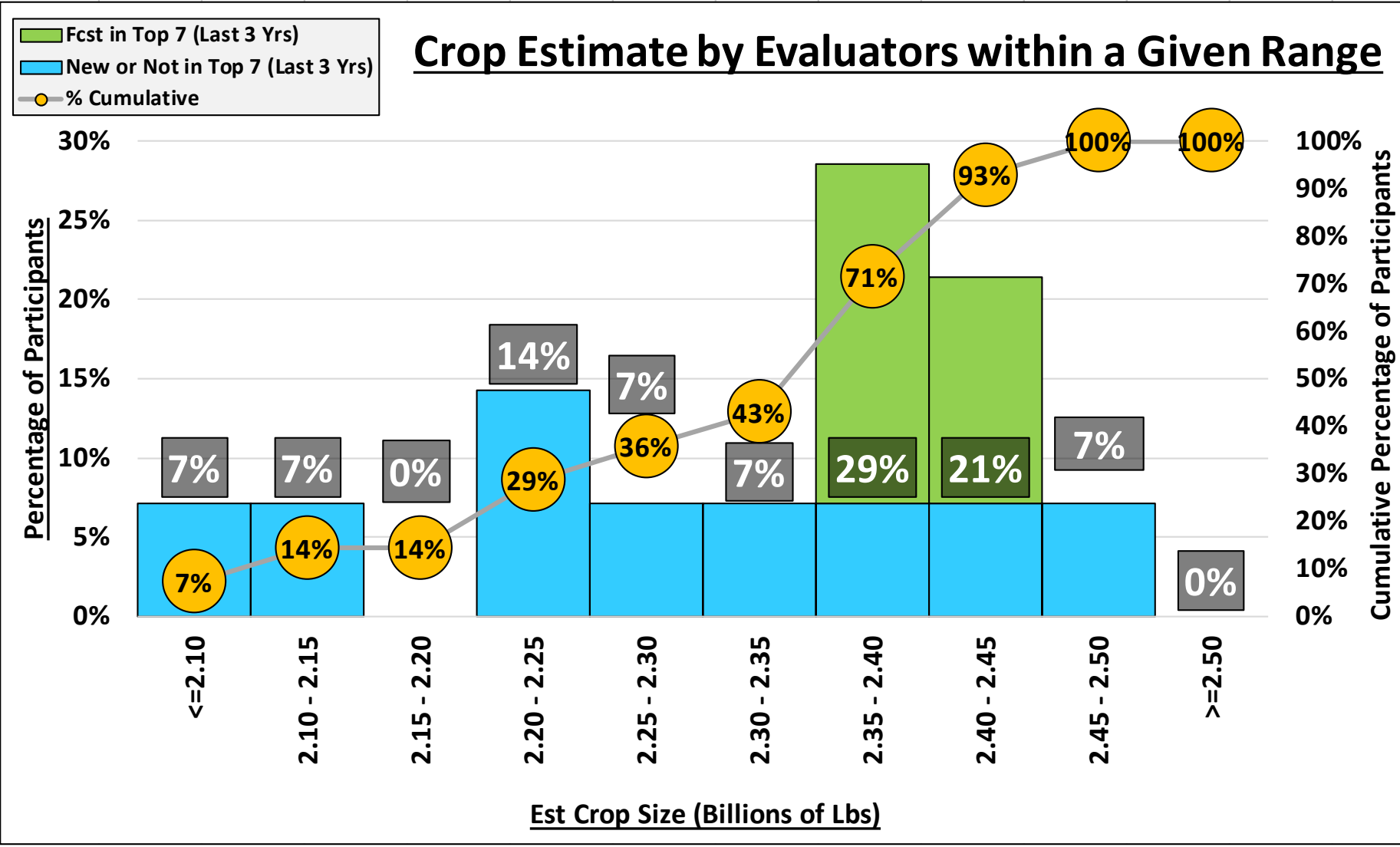
Southern Counties	20 & Older	16th - 19th	6th-15th	4th-5th	3rd leaf	Bearing Acreage	Total Acreage
Kern	22,916	39,229	103,598	23,786	WP&A Estimate based on Nursery Data	189,529	WP&A Estimate for 3rd Leaf & Older
Kings	3,329	3,378	23,951	5,145		35,803	
Tulare	4,697	7,800	53,475	13,691		79,663	
Fresno	28,994	40,942	149,433	30,804		250,173	
Riverside/San Luis Obispo	2,169	5	34	-		2,208	
Regional Total	62,105	91,354	330,491	73,426		12,000	
% within region of Bearing Acres	11.1%	16.4%	59.3%	13.2%		100%	
Percentile within the State	27.4%	41.8%	44.1%	44.1%	23.1%		

State Total	227,022	218,750	748,601	191,393	52,000	1,366,362	1,418,362
Percent of State Total	16.4%	15.8%	54.0%	13.8%		100.0%	

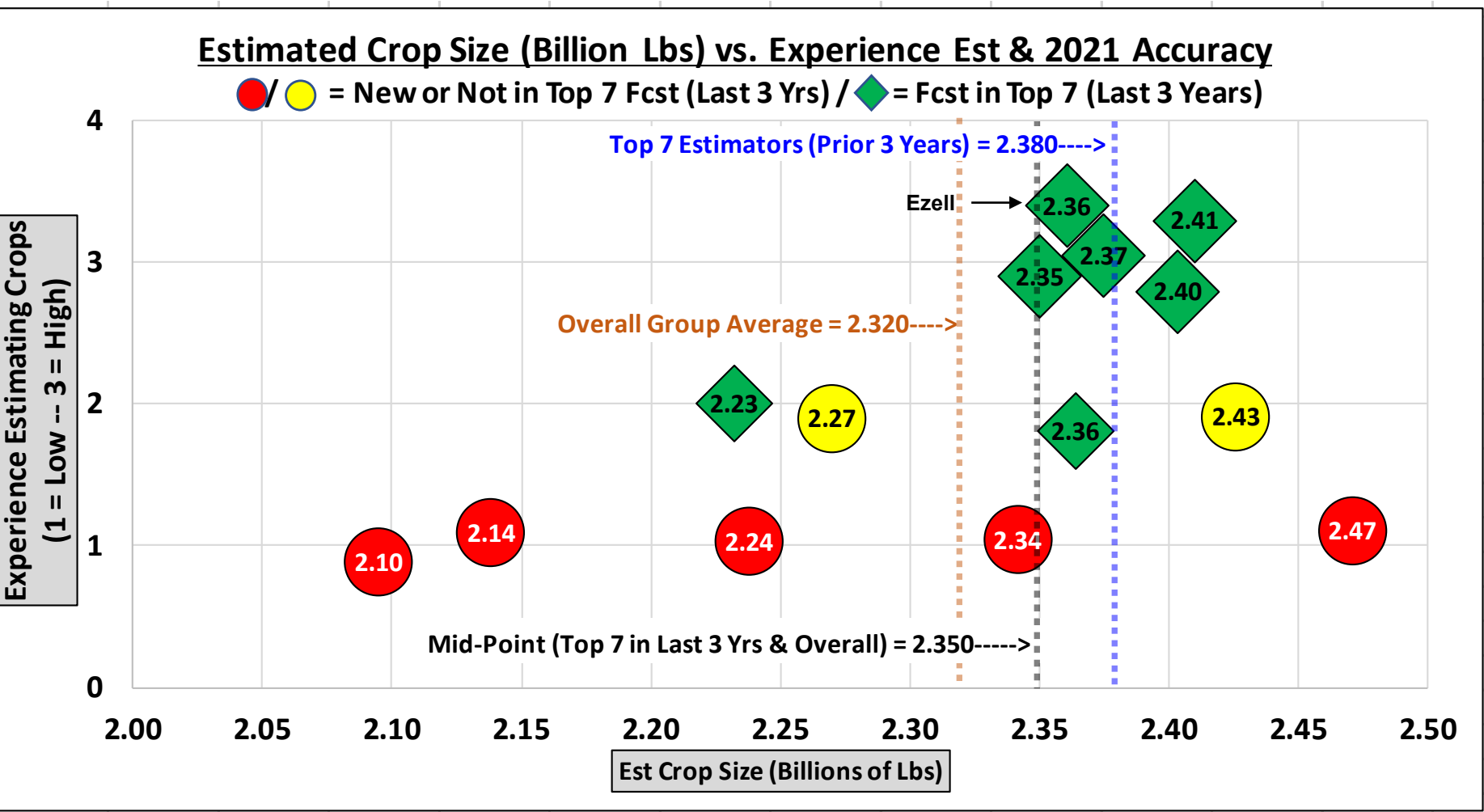
- = 7,000 acres added to this category to account for Land IQ's non-verified acreage figure
- = -19,400 acres removed to the total acreage to account for Land IQ's future removal figure.
- = Land IQ has no specific acreage for 3rd leaf and younger acreage

2023 California Almond Crop Evaluation & Estimate

Individual Group Estimates – as of 5/7/23

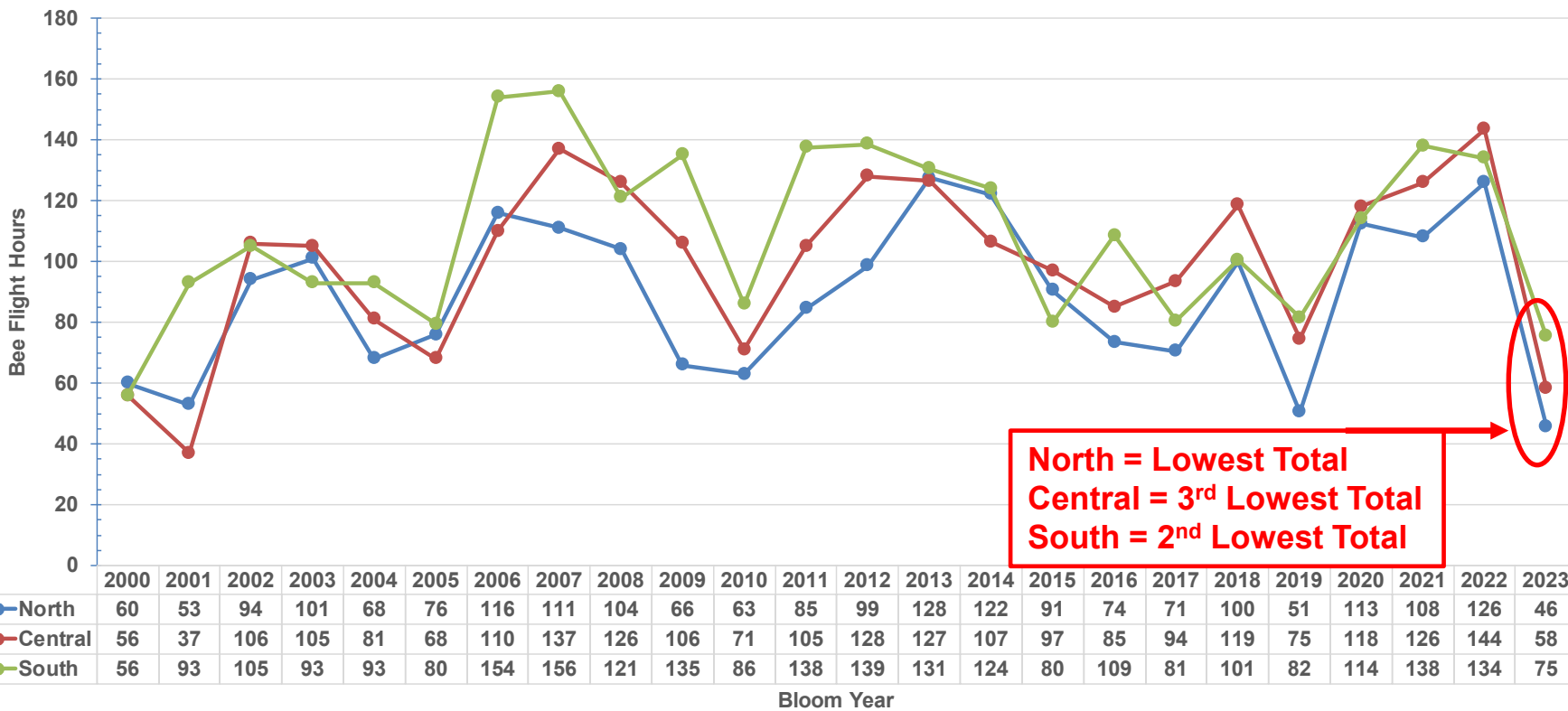


2023 California Almond Crop Evaluation & Estimate Distribution of Estimates – as of 5/7/23



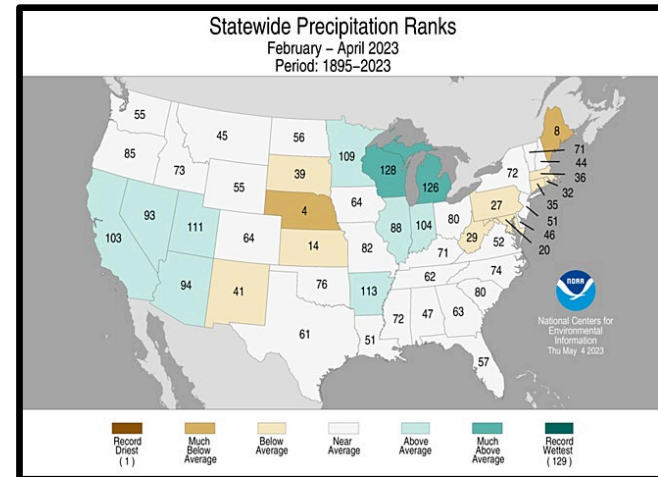
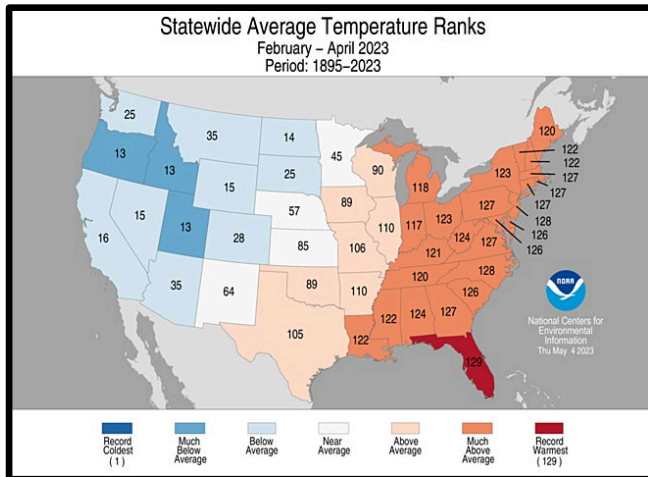
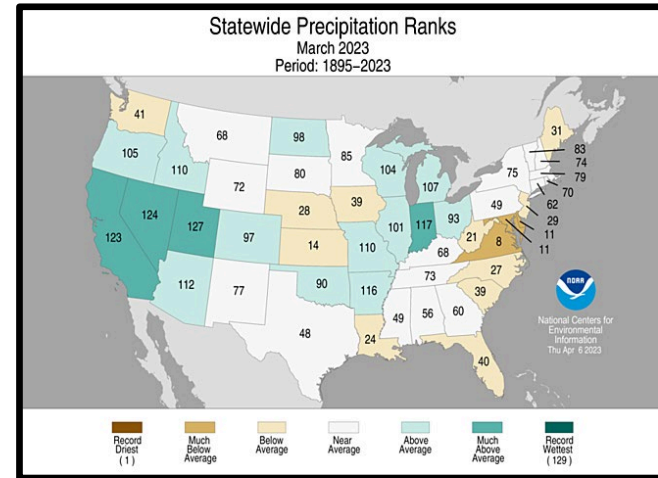
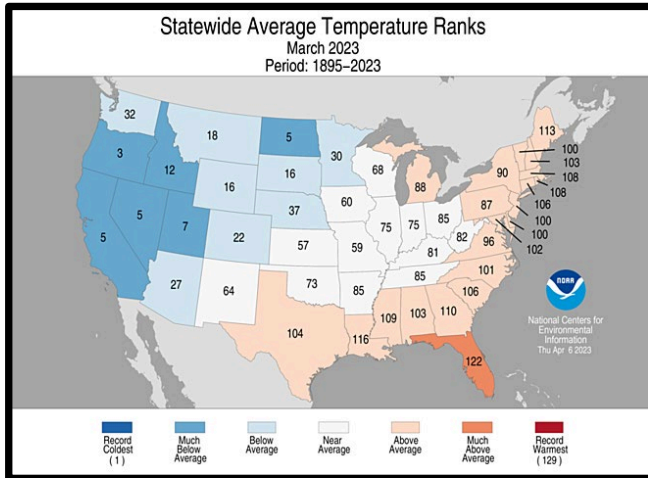
Historical Bee Flight Hours from Start to End of Bloom – CY'00 through CY'23

Historical California Almond Bloom Bee Hours by Region - 2000 thru 2023



2023 End-of-Bloom & Post-Bloom Weather

March 2023 was the 5th Coldest and 7th Wettest March on record (based on 129 years of record keeping). Unfortunately, this provided very poor conditions for the back-half of bloom as well as for the first 20 days of post-bloom.



March Weather (Temperatures/Rain/Wind)

2023 vs. 2022 & 2011 for key growing regions

2023 Post-Bloom (March) Weather by Region vs. 2022 & 2011

Bakersfield						
Time Period	Temperatures			Wind Speeds		Rainfall In Inches
	Avg High	Daily Avg	Avg Low	Avg High	Daily Avg	

<u>March 2023</u>						
Thru 29th	62	53	43	14	6	1.85
Thru 15th	60	52	42	13	5	0.84
16th - 29th	64	54	45	15	7	1.01

<u>March 2022</u>						
Thru 29th	72	60	49	12	6	1.34
Thru 15th	68	57	45	11	5	0.68
16th - 29th	77	64	53	14	6	0.66

<u>March 2011</u>						
Thru 29th	66	55	44	12	5	0.00
Thru 15th	68	56	44	10	4	0.00
16th - 29th	63	54	44	14	6	0.00

<u>2023 vs. 2022</u>						
Thru 29th	(10)	(7)	(6)	1	1	0.51
Thru 15th	(8)	(4)	(3)	1	1	0.16
16th - 29th	(13)	(10)	(9)	1	0	0.35

<u>2023 vs. 2011</u>						
Thru 29th	(4)	(2)	(1)	2	1	1.85
Thru 15th	(8)	(4)	(2)	2	1	0.84
16th - 29th	1	0	1	1	0	1.01

Fresno						
Time Period	Temperatures			Wind Speeds		Rainfall In Inches
	Avg High	Daily Avg	Avg Low	Avg High	Daily Avg	

<u>March 2023</u>						
Thru 29th	61	53	46	14	8	4.38
Thru 15th	59	52	45	14	7	3.40
16th - 29th	62	54	46	15	8	0.98

<u>March 2022</u>						
Thru 29th	72	60	49	11	5	0.74
Thru 15th	67	57	45	11	5	0.18
16th - 29th	76	64	52	12	6	0.56

<u>March 2011</u>						
Thru 29th	64	54	46	13	7	0.00
Thru 15th	67	57	47	11	5	0.00
16th - 29th	60	52	45	16	8	0.00

<u>2023 vs. 2022</u>						
Thru 29th	(11)	(7)	(3)	3	2	3.64
Thru 15th	(8)	(5)	0	3	2	3.22
16th - 29th	(14)	(10)	(6)	3	3	0.42

<u>2023 vs. 2011</u>						
Thru 29th	(3)	(2)	(0)	1	1	4.38
Thru 15th	(8)	(5)	(2)	3	2	3.40
16th - 29th	2	2	1	(1)	0	0.98

Sacramento						
Time Period	Temperatures			Wind Speeds		Rainfall In Inches
	Avg High	Daily Avg	Avg Low	Avg High	Daily Avg	

<u>March 2023</u>						
Thru 29th	59	52	44	18	10	4.54
Thru 15th	58	51	44	20	11	2.80
16th - 29th	61	52	45	16	9	1.74

<u>March 2022</u>						
Thru 29th	70	57	45	14	8	1.43
Thru 15th	67	54	42	14	7	0.11
16th - 29th	74	60	47	15	8	1.32

<u>March 2011</u>						
Thru 29th	59	52	45	17	9	0.00
Thru 15th	61	54	46	12	7	0.00
16th - 29th	56	50	43	21	12	0.00

<u>2023 vs. 2022</u>						
Thru 29th	(11)	(5)	(0)	4	2	3.11
Thru 15th	(9)	(3)	2	6	4	2.69
16th - 29th	(13)	(7)	(3)	1	1	0.42

<u>2023 vs. 2011</u>						
Thru 29th	0	(0)	(0)	2	1	4.54
Thru 15th	(3)	(3)	(2)	8	5	2.80
16th - 29th	4	2	1	(5)	(3)	1.74

(10) = Worse Conditions In 2023 for setting a crop than prior year's.

(3) = Colder than prior year's

Historical Almond Crop Estimates for California Almond Crop (Gross in Millions/Lbs.) - Updated 5/7/23

Crop Year	TNT Estimate	Final Crop	Variance		NASS Objective	Final Crop	Variance		NASS Subjective	Final Crop	Variance		WP&A Group Avg.	Final Crop	Variance		B. Ezell Estimate	Final Crop	Variance	
			in M/Lbs.	in %			in M/Lbs.	in %			in M/Lbs.	in %			in M/Lbs.	in %			in M/Lbs.	in %
1996	558	508	51	10.0%	530	508	23	4.4%	520	508	13	2.5%								
1997	764	757	8	1.0%	680	757	(77)	-10.1%	710	757	(47)	-6.1%								
1998	522	517	5	1.0%	540	517	23	4.4%	550	517	33	6.4%								
1999	863	830	33	4.0%	830	830	0	0.0%	760	830	(70)	-8.4%								
2000	636	698	(63)	-9.0%	640	698	(58)	-8.4%	675	698	(23)	-3.4%								
2001	832	824	8	1.0%	850	824	26	3.2%	875	824	51	6.2%								
2002	961	1,082	(121)	-11.2%	980	1,082	(102)	-9.4%	940	1,082	(142)	-13.1%								
2003	930	1,033	(103)	-10.0%	1,000	1,033	(33)	-3.2%	920	1,033	(113)	-10.9%								
2004	1,140	998	142	14.2%	1,080	998	82	8.2%	1,100	998	102	10.2%								
2005	948	912	36	3.9%	880	912	(32)	-3.5%	850	912	(62)	-6.8%								
2006	970	1,117	(147)	-13.2%	1,050	1,117	(67)	-6.0%	1,020	1,117	(97)	-8.7%								
2007	1,370	1,383	(13)	-0.9%	1,330	1,383	(53)	-3.8%	1,310	1,383	(73)	-5.3%								
2008	1,290	1,614	(324)	-20.1%	1,500	1,614	(114)	-7.1%	1,460	1,614	(154)	-9.5%								
2009	1,300	1,406	(106)	-7.5%	1,350	1,406	(56)	-4.0%	1,450	1,406	44	3.1%								
2010	1,440	1,628	(188)	-11.5%	1,650	1,628	22	1.4%	1,530	1,628	(98)	-6.0%								
2011	1,840	2,020	(180)	-8.9%	1,950	2,020	(70)	-3.5%	1,750	2,020	(270)	-13.4%								
2012	1,830	1,884	(54)	-2.9%	2,100	1,884	216	11.5%	2,000	1,884	116	6.2%	2,099	1,884	215	11.4%	2,070	1,884	186	9.9%
2013	1,960	2,010	(50)	-2.5%	1,850	2,010	(160)	-8.0%	2,000	2,010	(10)	-0.5%	1,997	2,010	(13)	-0.6%	2,035	2,010	25	1.2%
2014	2,000	1,870	130	7.0%	2,100	1,870	230	12.3%	1,950	1,870	80	4.3%	1,943	1,870	73	3.9%	1,917	1,870	47	2.5%
2015	1,880	1,895	(15)	-0.8%	1,800	1,895	(95)	-5.0%	1,850	1,895	(45)	-2.4%	1,831	1,895	(64)	-3.4%	1,862	1,895	(33)	-1.7%
2016	2,060	2,135	(75)	-3.5%	2,050	2,135	(85)	-4.0%	2,000	2,135	(135)	-6.3%	2,055	2,135	(80)	-3.7%	2,086	2,135	(49)	-2.3%
2017	2,270	2,260	10	0.4%	2,250	2,260	(10)	-0.4%	2,200	2,260	(60)	-2.7%	2,335	2,260	75	3.3%	2,340	2,260	80	3.5%
2018	2,510	2,270	240	10.6%	2,450	2,270	180	7.9%	2,300	2,270	30	1.3%	2,200	2,270	(70)	-3.1%	2,223	2,270	(47)	-2.1%
2019	2,530	2,551	(21)	-0.8%	2,200	2,551	(351)	-13.8%	2,500	2,551	(51)	-2.0%	2,570	2,551	19	0.7%	2,580	2,551	29	1.1%
2020	2,960	3,107	(147)	-4.7%	3,000	3,107	(107)	-3.4%	3,000	3,107	(107)	-3.4%	2,850	3,107	(257)	-8.3%	2,880	3,107	(227)	-7.3%
2021	2,800	2,918	(118)	-4.0%	2,800	2,918	(118)	-4.0%	3,200	2,918	282	9.7%	2,950	2,918	32	1.1%	2,943	2,918	25	0.9%
2022	2,900	2,560	340	13.3%	2,600	2,560	40	1.6%	2,800	2,560	240	9.4%	2,800	2,560	240	9.4%	2,816	2,560	256	10.0%
2023 Est.	2,290											2,350				2,360				
Overall Straight Avg.			(27)	-1.7%			(28)	-1.6%			(21)	-1.8%			15	1.0%			27	1.4%
Most Recent 10 Yr Straight Avg.			29	1.5%			(48)	-1.7%			22	0.7%			(5)	-0.1%			11	0.6%
Most Recent 5 Yr Straight Avg.			59	2.9%			(71)	-2.4%			79	3.0%			(7)	0.0%			7	0.5%
Most Recent 3 Yr Straight Avg.			25	1.5%			(62)	-2.0%			138	5.2%			5	0.7%			18	1.2%
# of times Over-estimated:			7	25.9%			9	33.3%			10	37.0%			5	45.5%			6	54.5%
# of times Under-estimated:			13	48.1%			16	59.3%			16	59.3%			4	36.4%			4	36.4%
# of times within +/- 1%:			7	25.9%			2	7.4%			1	3.7%			2	18.2%			1	9.1%
Standard Deviation: CY13 - CY22:			158	6.4%			168	7.5%			140	5.4%			130	4.9%			121	4.5%

[Grey Box] = Current Outlook as of 5/7/23