

# 2022 STANDING ACREAGE - INITIAL ESTIMATE

In cooperation with the Almond Board of California

Revised: May 2, 2022



## RESULTS

Each year Land IQ produces an in-year, statewide almond acreage estimate. The initial bearing acreage estimate is provided in April, with the final estimate, including a non-bearing estimate, provided in November.

The initial bearing acreage estimate is for the 2022 production year (September 1, 2021 - August 31, 2022). Removed orchards have been determined through spatial analysis as of March 31, 2022. Therefore, a numerical estimate of orchards to be removed based on historical analyses and present conditions from April 1, 2022 through August 31, 2022 is also included.

As a result, the 2022 initial estimates are:

- 1,338,496 acres of bearing almonds
- 59,732 acres of removed almonds

Both bearing acreage and removals will be updated for the final 2022 total acreage estimate to be delivered in November 2022. It should be noted that bearing acreage may be adjusted slightly (+/- 1-3%) following summer 2022 ground truthing verification. Any change will mostly likely affect acreage transitioning from non-bearing in 2021 to bearing in 2022, thus the impact on estimates of overall production volume should be considered negligible.

The following table represents removals and bearing acreage by County for 2022. Acreage by year planted and removals by year planted are provided on the following pages.

County	Bearing Acreage	Removed Acreage	County	Bearing Acreage	Removed Acreage
Alameda	1,410	0	Placer	2,015	0
Butte	31,762	872	Riverside	6	0
Calaveras	172	0	Sacramento	1,995	1
Colusa	59,859	2,047	San Joaquin	78,727	1,125
Contra Costa	342	0	San Luis Obispo	2,226	0
Fresno	251,095	8,727	Shasta	5	0
Glenn	46,475	3,299	Solano	20,112	5
Kern	198,797	6,784	Stanislaus	175,052	4,803
Kings	35,019	1,470	Sutter	13,448	256
Lake	36	1	Tehama	17,137	218
Madera	143,226	3,824	Tulare	71,900	2,610
Mariposa	0	4	Yolo	39,341	758
Merced	139,272	4,866	Yuba	1,967	161

\*Reflects standing acreage only, an additional 25,000 estimated acres are included in the attached spreadsheet. Some additional differences may occur due to rounding.

## INTRODUCTION

Beginning in 2019, the ABC began an annual mapping process with two acreage summaries, one delivered in April and one delivered in November, during the same production year. The Land IQ April delivery informs and aligns with the United States Department of Agriculture (USDA) – National Agricultural Statistics Service (NASS) California Almond Forecast, which is an initial subjective forecast for acreage and yield.

## APPROACH

Land IQ draws upon on multiple lines of evidence including agronomic and remote sensing knowledge, unique field boundaries, robust on-the-ground verification, customized image analysis, artificial intelligence and machine learning algorithms to classify almond orchards.

For each mapped year, Land IQ performs the following steps:

1. Imagery Acquisition
2. Irrigated Field Boundary Delineation
3. Ground Truthing
4. Remote Sensing Analysis
5. Change Analysis and Update

For the initial estimate determining removals and bearing acreage, Land IQ utilizes the spatial mapping from 2021, in addition to a change analysis to determine removals.

2022 Initial Bearing and Removed Acreage Estimates by Year Planted

	1984		1985		1986		1987		1988	
	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed
Alameda	0	0	0	0	0	0	0	0	0	0
Butte	6,097	263	52	0	202	0	242	0	143	0
Calaveras	12	0	0	0	0	0	0	0	0	0
Colusa	639	102	10	0	50	0	47	7	16	38
Contra Costa	3	0	0	0	0	0	0	0	0	0
Fresno	205	20	74	0	0	0	1	0	85	0
Glenn	1,015	109	47	0	58	0	77	0	6	78
Kern	271	76	35	0	0	0	0	0	36	89
Kings	0	0	0	0	0	0	0	0	0	0
Lake	0	0	0	0	0	0	0	0	0	0
Madera	1,773	0	9	0	139	51	65	43	13	114
Mariposa	0	0	0	0	0	0	0	0	0	0
Merced	7,327	412	216	63	142	0	358	29	423	62
Placer	0	0	0	0	0	0	0	0	0	0
Riverside	0	0	0	0	0	0	0	0	0	0
Sacramento	8	0	0	0	0	0	0	0	0	0
San Joaquin	4,483	359	219	0	83	0	142	0	261	0
San Luis Obispo	89	0	19	0	21	0	24	0	9	0
Shasta	0	0	0	0	0	0	0	0	0	0
Solano	190	0	0	0	36	0	0	0	49	0
Stanislaus	9,767	635	280	0	312	23	477	39	583	105
Sutter	424	0	36	0	2	0	51	0	11	32
Tehama	403	0	7	0	23	0	0	0	0	0
Tulare	187	0	0	0	0	0	0	0	0	0
Yolo	121	0	0	0	1	0	5	0	37	1
Yuba	0	0	0	0	0	0	0	0	0	0
<b>Grand Total</b>	<b>33,017</b>	<b>1,976</b>	<b>1,004</b>	<b>63</b>	<b>1,069</b>	<b>74</b>	<b>1,488</b>	<b>118</b>	<b>1,670</b>	<b>519</b>

Source: Land IQ. California Statewide Almond Mapping - 2022. Based on data from USDA National Agricultural Imaging Program (NAIP), USGS Landsat, and other private imagery resources.

2022 Initial Bearing and Removed Acreage Estimates by Year Planted

	1989		1990		1991		1992		1993	
	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed
Alameda	0	0	0	0	0	0	0	0	0	0
Butte	177	0	347	0	178	0	409	81	506	84
Calaveras	0	0	0	0	0	0	0	0	5	0
Colusa	47	0	377	27	104	0	100	1	321	0
Contra Costa	0	0	0	0	0	0	0	0	0	0
Fresno	115	42	584	0	163	0	407	96	343	0
Glenn	286	0	162	1	159	19	252	13	545	0
Kern	172	77	57	0	46	241	58	114	195	59
Kings	0	0	0	0	0	0	2	0	0	0
Lake	0	0	12	0	0	0	0	0	25	1
Madera	215	40	100	151	105	0	121	0	786	0
Mariposa	0	0	0	0	0	0	0	0	0	0
Merced	604	13	946	87	546	111	802	178	1,434	458
Placer	0	0	0	0	0	0	0	0	0	0
Riverside	0	0	0	0	0	0	0	0	0	0
Sacramento	0	0	0	0	0	0	0	0	0	1
San Joaquin	245	47	316	11	122	18	224	44	461	51
San Luis Obispo	31	0	63	0	6	0	45	0	12	0
Shasta	0	0	0	0	0	0	0	0	2	0
Solano	8	0	43	0	0	0	53	0	112	0
Stanislaus	278	10	787	22	683	139	670	65	1,326	154
Sutter	36	0	139	0	56	0	73	0	43	0
Tehama	11	0	21	0	26	0	0	0	0	0
Tulare	0	0	3	0	78	0	75	0	208	0
Yolo	16	0	175	117	0	1	3	74	352	0
Yuba	0	0	0	0	4	0	0	0	36	0
<b>Grand Total</b>	<b>2,240</b>	<b>228</b>	<b>4,130</b>	<b>415</b>	<b>2,276</b>	<b>530</b>	<b>3,293</b>	<b>666</b>	<b>6,710</b>	<b>806</b>

Source: Land IQ. California Statewide Almond Mapping - 2022. Based on data from USDA National Agricultural Imaging Program (NAIP), USGS Landsat, and other private imagery resources.

2022 Initial Bearing and Removed Acreage Estimates by Year Planted

	1994		1995		1996		1997		1998	
	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed
Alameda	0	0	0	0	0	0	0	0	0	0
Butte	201	0	486	88	135	0	430	9	916	69
Calaveras	0	0	0	0	0	0	0	0	0	0
Colusa	552	41	237	394	345	142	1,308	505	667	324
Contra Costa	0	0	0	0	0	0	0	0	0	0
Fresno	226	221	38	299	513	421	1,781	1,061	2,015	800
Glenn	473	7	317	51	475	0	619	674	412	353
Kern	293	0	178	39	1,050	160	1,158	352	3,090	468
Kings	0	0	0	0	0	0	242	0	570	157
Lake	0	0	0	0	0	0	0	0	0	0
Madera	812	216	580	0	774	353	1,555	381	1,163	196
Mariposa	0	0	0	0	0	0	0	0	0	0
Merced	930	158	1,026	179	2,031	489	2,359	103	1,489	262
Placer	0	0	0	0	0	0	0	0	0	0
Riverside	0	0	0	0	0	0	0	0	0	0
Sacramento	0	0	0	0	0	0	0	0	2	0
San Joaquin	199	9	366	33	1,054	98	775	38	875	109
San Luis Obispo	1,723	0	138	0	3	0	0	0	0	0
Shasta	0	0	0	0	0	0	0	0	3	0
Solano	31	0	117	0	0	0	5	0	229	0
Stanislaus	1,909	199	1,353	205	1,755	192	2,079	440	3,243	826
Sutter	128	0	1	0	47	33	603	0	172	0
Tehama	5	43	59	0	180	0	225	119	108	0
Tulare	152	0	106	110	200	0	176	178	253	250
Yolo	132	52	173	0	243	0	441	13	200	7
Yuba	2	0	0	0	0	0	0	138	0	0
<b>Grand Total</b>	<b>7,769</b>	<b>948</b>	<b>5,175</b>	<b>1,398</b>	<b>8,804</b>	<b>1,888</b>	<b>13,756</b>	<b>4,012</b>	<b>15,407</b>	<b>3,820</b>

Source: Land IQ. California Statewide Almond Mapping - 2022. Based on data from USDA National Agricultural Imaging Program (NAIP), USGS Landsat, and other private imagery resources.

2022 Initial Bearing and Removed Acreage Estimates by Year Planted

	1999		2000		2001		2002		2003	
	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed
Alameda	0	0	0	0	0	0	0	0	0	0
Butte	490	0	573	0	364	0	612	9	559	0
Calaveras	0	0	0	0	0	0	0	0	0	0
Colusa	1,980	258	1,277	66	1,591	4	1,142	0	2,155	0
Contra Costa	0	0	0	0	2	0	0	0	0	0
Fresno	2,742	1,060	4,624	699	3,906	226	5,843	710	5,561	803
Glenn	478	826	490	27	484	588	536	26	1,551	46
Kern	2,417	1,163	1,688	281	1,279	623	2,742	504	5,660	701
Kings	393	0	288	0	299	0	1,051	221	136	0
Lake	0	0	0	0	0	0	0	0	0	0
Madera	1,021	45	1,767	486	1,395	0	2,178	93	3,682	226
Mariposa	0	0	0	0	0	0	0	0	0	0
Merced	1,904	613	2,040	63	2,234	91	2,003	116	3,020	29
Placer	0	0	0	0	0	0	0	0	0	0
Riverside	0	0	0	0	0	0	0	0	0	0
Sacramento	0	0	0	0	0	0	0	0	0	0
San Joaquin	1,342	67	1,082	29	1,299	28	1,102	94	1,391	28
San Luis Obispo	0	0	0	0	0	0	0	0	9	0
Shasta	0	0	0	0	0	0	0	0	0	0
Solano	87	0	114	0	146	0	34	0	148	0
Stanislaus	2,765	497	2,851	198	1,640	75	3,238	118	3,053	63
Sutter	186	0	74	0	114	0	0	0	127	145
Tehama	146	0	346	0	301	0	299	0	239	0
Tulare	614	144	161	224	122	72	534	34	1,046	109
Yolo	459	116	194	0	285	0	175	0	609	140
Yuba	48	0	47	0	0	0	0	0	0	0
<b>Grand Total</b>	<b>17,072</b>	<b>4,789</b>	<b>17,613</b>	<b>2,073</b>	<b>15,461</b>	<b>1,706</b>	<b>21,488</b>	<b>1,925</b>	<b>28,948</b>	<b>2,290</b>

Source: Land IQ. California Statewide Almond Mapping - 2022. Based on data from USDA National Agricultural Imaging Program (NAIP), USGS Landsat, and other private imagery resources.

2022 Initial Bearing and Removed Acreage Estimates by Year Planted

	2004		2005		2006		2007		2008	
	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed
Alameda	0	0	0	0	0	0	0	0	0	0
Butte	1,292	0	1,109	31	620	59	666	132	3,531	43
Calaveras	0	0	0	0	0	0	0	0	0	0
Colusa	5,327	28	3,700	0	3,559	0	2,084	0	3,037	103
Contra Costa	0	0	0	0	0	0	0	0	0	0
Fresno	11,743	453	15,317	572	16,100	434	11,331	231	6,252	296
Glenn	1,945	0	2,490	0	1,755	0	1,737	0	4,699	439
Kern	13,735	242	18,537	557	16,141	573	7,606	76	5,436	0
Kings	928	0	1,241	326	1,220	265	1,000	122	756	35
Lake	0	0	0	0	0	0	0	0	0	0
Madera	5,971	383	6,424	217	8,207	320	7,481	196	11,542	155
Mariposa	0	0	0	0	0	0	0	0	0	0
Merced	6,510	440	6,553	169	6,160	212	7,959	322	2,648	38
Placer	0	0	0	0	0	0	0	0	0	0
Riverside	0	0	0	0	6	0	0	0	0	0
Sacramento	0	0	0	0	0	0	0	0	14	0
San Joaquin	2,608	5	2,236	7	1,898	0	2,119	2	1,748	17
San Luis Obispo	0	0	0	0	0	0	0	0	0	0
Shasta	0	0	0	0	0	0	0	0	0	0
Solano	153	0	476	0	361	0	112	0	86	0
Stanislaus	10,483	166	7,480	114	6,377	42	6,962	72	5,900	4
Sutter	744	0	201	0	611	0	622	0	213	0
Tehama	590	0	269	0	510	0	1,110	0	1,347	55
Tulare	2,199	13	2,266	60	2,431	936	2,421	297	1,670	0
Yolo	1,311	125	1,480	0	1,703	106	1,222	0	1,227	0
Yuba	86	0	47	0	214	0	12	23	9	0
<b>Grand Total</b>	<b>65,626</b>	<b>1,857</b>	<b>69,824</b>	<b>2,055</b>	<b>67,874</b>	<b>2,948</b>	<b>54,444</b>	<b>1,473</b>	<b>50,116</b>	<b>1,185</b>

Source: Land IQ. California Statewide Almond Mapping - 2022. Based on data from USDA National Agricultural Imaging Program (NAIP), USGS Landsat, and other private imagery resources.

2022 Initial Bearing and Removed Acreage Estimates by Year Planted

	2009		2010		2011		2012		2013	
	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed
Alameda	0	0	0	0	0	0	0	0	0	0
Butte	1,288	0	1,205	0	639	0	385	0	582	3
Calaveras	0	0	33	0	0	0	0	0	0	0
Colusa	2,505	0	2,071	5	2,058	0	1,219	0	1,887	0
Contra Costa	0	0	0	0	0	0	0	0	0	0
Fresno	5,514	29	5,729	0	8,469	4	9,294	0	12,277	0
Glenn	1,137	0	610	0	2,215	0	1,596	0	2,016	0
Kern	5,755	38	4,418	187	8,838	1	6,434	1	8,801	53
Kings	823	0	768	0	404	0	1,441	8	2,209	0
Lake	0	0	0	0	0	0	0	0	0	0
Madera	5,778	0	2,943	0	9,078	0	4,391	141	7,731	0
Mariposa	0	0	0	4	0	0	0	0	0	0
Merced	3,145	0	2,602	0	3,384	0	3,487	0	4,925	10
Placer	0	0	0	0	0	0	0	0	0	0
Riverside	0	0	0	0	0	0	0	0	0	0
Sacramento	0	0	0	0	0	0	0	0	0	0
San Joaquin	1,180	14	1,326	1	2,998	0	3,123	7	4,042	0
San Luis Obispo	0	0	0	0	0	0	0	0	0	0
Shasta	0	0	0	0	0	0	0	0	0	0
Solano	121	0	38	3	128	0	13	0	181	0
Stanislaus	4,887	180	3,522	8	8,455	60	6,652	91	9,815	42
Sutter	414	21	177	0	372	0	60	0	366	0
Tehama	341	0	109	0	327	0	510	0	1,211	0
Tulare	2,348	0	2,361	0	3,074	0	1,964	0	1,081	0
Yolo	1,962	0	486	0	1,805	2	537	0	2,657	0
Yuba	0	0	7	0	31	0	0	0	224	0
<b>Grand Total</b>	<b>37,199</b>	<b>282</b>	<b>28,404</b>	<b>209</b>	<b>52,275</b>	<b>67</b>	<b>41,107</b>	<b>248</b>	<b>60,004</b>	<b>108</b>

Source: Land IQ. California Statewide Almond Mapping - 2022. Based on data from USDA National Agricultural Imaging Program (NAIP), USGS Landsat, and other private imagery resources.

2022 Initial Bearing and Removed Acreage Estimates by Year Planted

	2014		2015		2016		2017		2018	
	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed	Bearing	Removed
Alameda	146	0	377	0	165	0	0	0	0	0
Butte	651	0	938	0	2,094	0	1,557	0	1,642	0
Calaveras	0	0	100	0	22	0	0	0	0	0
Colusa	1,446	0	2,226	0	5,539	0	3,416	0	3,765	1
Contra Costa	0	0	0	0	55	0	235	0	18	0
Fresno	17,049	24	20,332	14	25,862	43	24,165	6	21,864	155
Glenn	2,434	0	464	3	5,442	1	4,494	36	4,251	3
Kern	9,557	7	11,500	0	19,337	23	12,247	0	18,747	78
Kings	2,495	45	3,729	291	6,958	0	2,454	0	3,246	0
Lake	0	0	0	0	0	0	0	0	0	0
Madera	12,093	0	7,720	0	11,329	0	11,610	14	7,182	1
Mariposa	0	0	0	0	0	0	0	0	0	0
Merced	10,483	19	7,306	7	10,938	118	8,338	3	13,628	0
Placer	21	0	0	0	1,032	0	0	0	713	0
Riverside	0	0	0	0	0	0	0	0	0	0
Sacramento	68	0	185	0	750	0	172	0	794	0
San Joaquin	7,315	3	4,427	0	7,671	0	7,126	0	9,227	0
San Luis Obispo	31	0	0	0	0	0	3	0	0	0
Shasta	0	0	0	0	0	0	0	0	0	0
Solano	2,657	0	4,863	0	4,540	2	2,530	0	1,886	0
Stanislaus	12,551	3	9,186	3	12,509	3	9,276	1	12,986	4
Sutter	380	0	434	0	2,534	18	401	0	2,054	0
Tehama	1,438	0	594	0	3,506	0	772	0	1,684	1
Tulare	7,937	53	7,609	73	11,668	56	5,434	0	10,404	0
Yolo	3,990	0	4,203	0	5,451	0	3,903	5	2,833	0
Yuba	164	0	216	0	345	0	40	0	268	0
<b>Grand Total</b>	<b>92,906</b>	<b>154</b>	<b>86,409</b>	<b>391</b>	<b>137,746</b>	<b>265</b>	<b>98,173</b>	<b>65</b>	<b>117,192</b>	<b>243</b>

Source: Land IQ. California Statewide Almond Mapping - 2022. Based on data from USDA National Agricultural Imaging Program (NAIP), USGS Landsat, and other private imagery resources.

2022 Initial Bearing and Removed Acreage Estimates by Year Planted

	2019*		2020 - 2022**		TOTAL	
	Bearing	Removed	Standing	Removed	Bearing	Removed
Alameda	722	0			1,410	0
Butte	444	0			31,762	872
Calaveras	0	0			172	0
Colusa	3,058	0			59,859	2,047
Contra Costa	28	0			342	0
Fresno	10,569	0		8	251,095	8,727
Glenn	747	0			46,475	3,299
Kern	11,282	0			198,797	6,784
Kings	2,365	0			35,019	1,470
Lake	0	0			36	1
Madera	5,494	0			143,226	3,824
Mariposa	0	0			0	4
Merced	9,374	10			139,272	4,866
Placer	250	0			2,015	0
Riverside	0	0			6	0
Sacramento	4	0			1,995	1
San Joaquin	3,640	9			78,727	1,125
San Luis Obispo	0	0			2,226	0
Shasta	0	0			5	0
Solano	564	0			20,112	5
Stanislaus	8,961	0		4	175,052	4,803
Sutter	1,542	7			13,448	256
Tehama	420	0			17,137	218
Tulare	3,120	0			71,900	2,610
Yolo	951	0			39,341	758
Yuba	169	0			1,967	161
<b>Grand Total</b>	<b>88,705</b>	<b>25</b>		<b>12</b>	<b>1,356,396</b>	<b>41,832</b>

Estimated Removals (4/2022-09/2022) 17,900 17,900  
**Total Estimated Acres 1,338,496 59,732**

Source: Land IQ. California Statewide Almond Mapping - 2022. Based on data from USDA National Agricultural Imaging Program (NAIP), USGS Landsat, and other private imagery resources.

\* 2019 Bearing Acreage will be finalized in November. An estimate of 25,000 acres has been added to the total, but not to each county.

\*\* A non-bearing estimate will be provided in November.