

## GRAPE CRUSH REPORT OVERVIEW

Information contained in this Report was supplied by processors to fulfill the reporting requirements of Section 55601.5 of the Food and Agricultural Code.

The Final Grape Crush Report includes all grape tonnage crushed during the 2016 season. It also includes purchased tonnage and pricing information for grapes with final prices prior to January 10, 2017. The Final Grape Crush Report, published on March 10, contains any late reports or corrections to the preliminary report.

Details of the crushed tonnage, degrees Brix, and weighted average prices were reported by grape type and variety, as well as by grape pricing districts. The 17 districts refer to the area in which the grapes were grown as defined in the Administrative Code. A district map is located on the inside of the front cover.

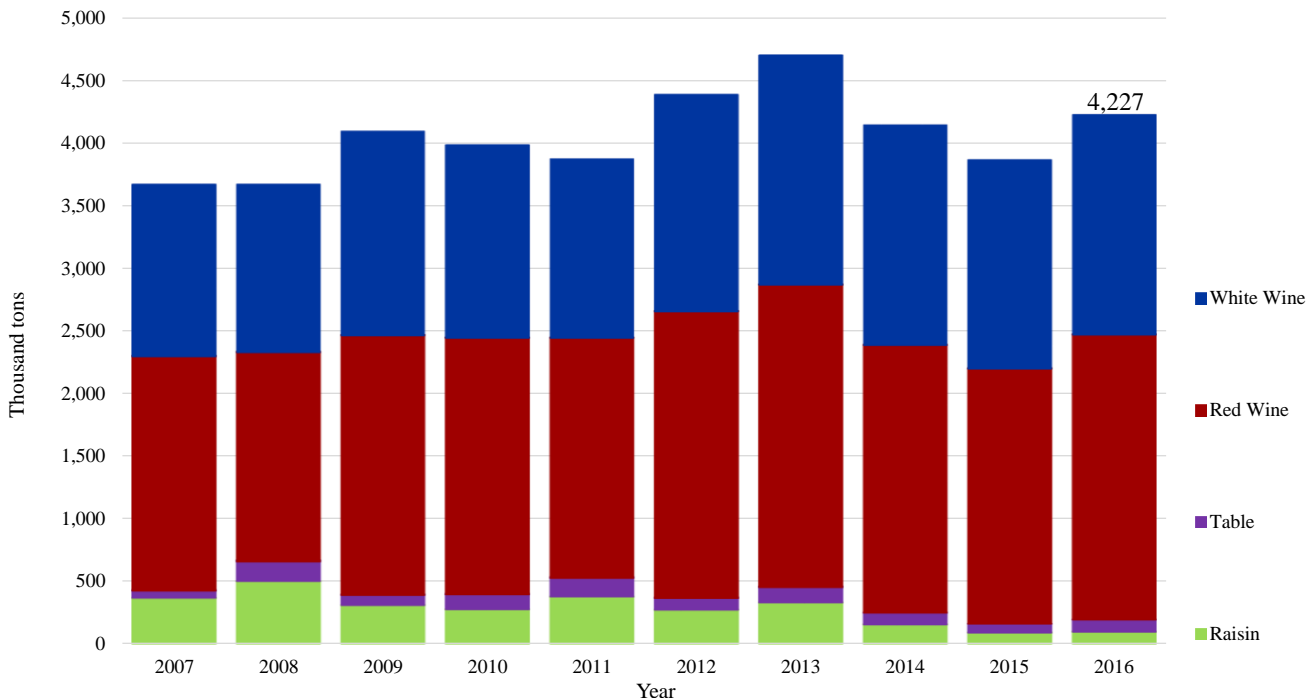
### SUMMARY OF GRAPE TONNAGES AND PRICES

The 2016 crush totaled 4,227,110 tons, up 9.3 percent from the 2015 crush of 3,868,459 tons. Red wine varieties accounted for the largest share of all grapes crushed, at 2,278,593 tons, up 11.6 percent from 2015. The 2016 white wine variety crush totaled 1,752,554 tons, up 5.3 percent from 2015. Tons crushed of raisin type varieties totaled 98,205, up 6.2 percent from 2015, and tons crushed of table type varieties totaled 97,759, up 38.3 percent from 2015. (See chart below.)

The Grape Crush Report includes the total number of tons crushed for concentrate production. In determining grape tonnage crushed for concentrate production, each processor was required to report the estimated equivalent tons of grapes crushed for grape concentrate. For the 2016 season, this total was 393,045 tons, 9.3 percent of the 2016 grape crush total. This report provides only the aggregate figure for grapes crushed for concentrate production and does not include information by district, type, or variety.

The 2016 average price of all varieties was \$762.84, up 13.6 percent from 2015. Average prices for the 2016 crop by type were as follows: red wine grapes, \$918.34, up 16.3 percent from 2015; white wine grapes, \$598.07, up 10.7 percent from 2015; raisin grapes, \$213.64, down 13.7 percent; and table grapes, \$153.05, down 39.4 percent.

**California Grapes Crushed**  
2007-2016



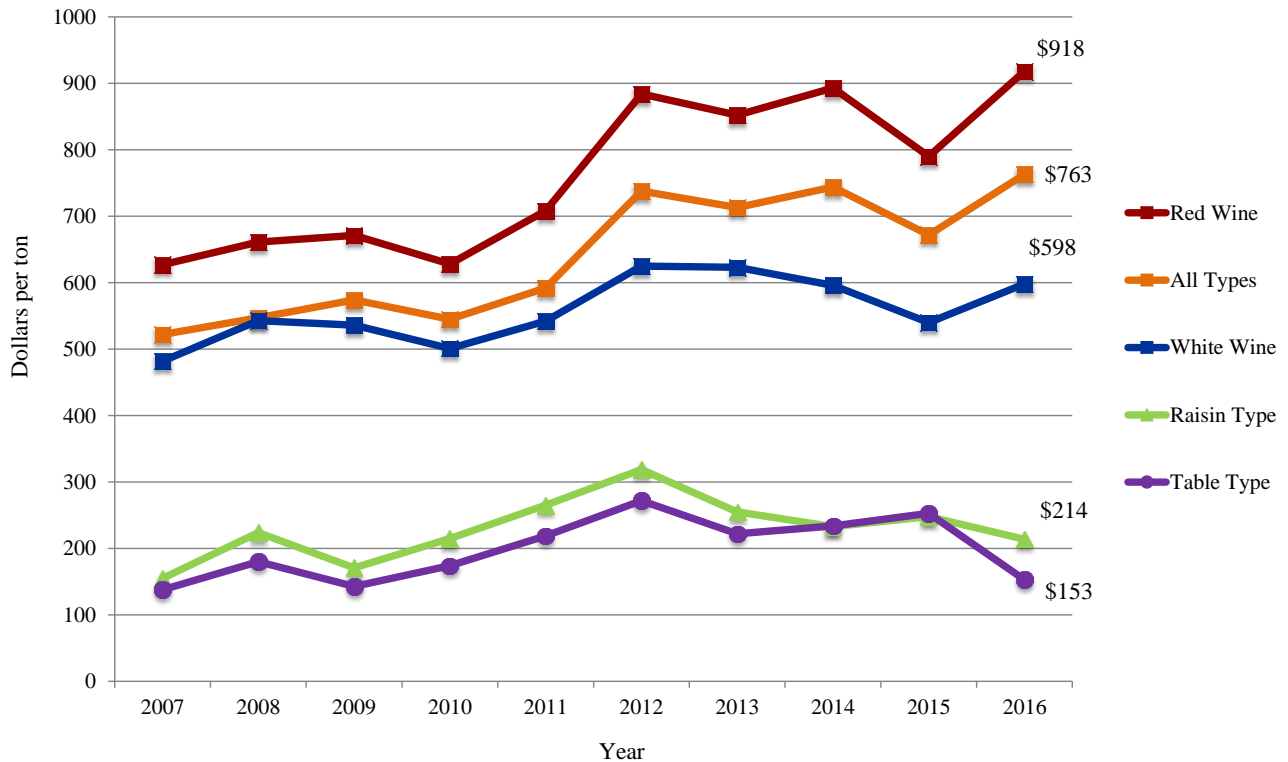
Source: USDA, National Agricultural Statistics Service, Pacific Regional Office - California

## CALIFORNIA GRAPE CRUSH TONNAGE AND PRICE, 1988-2016

Crop year	Red wine type		White wine type		Total wine type		Raisin type		Table type		All types	
	Thousand tons	\$/ton	Thousand tons	\$/ton	Thousand tons	\$/ton	Thousand tons	\$/ton	Thousand tons	\$/ton	Thousand tons	\$/ton
1988	760	409	1,356	238	2,117	297	415	116	312	131	2,843	253
1989	872	410	1,272	297	2,144	342	370	132	211	128	2,725	297
1990	804	355	1,331	277	2,135	306	268	126	170	127	2,573	276
1991	840	383	1,289	319	2,129	344	284	150	157	141	2,570	310
1992	888	438	1,209	364	2,097	395	785	182	217	170	3,099	325
1993	979	430	1,327	316	2,306	365	452	152	137	147	2,895	323
1994	936	462	1,242	317	2,177	379	239	118	123	136	2,540	344
1995	1,052	515	1,175	351	2,277	429	432	164	170	162	2,829	372
1996	1,079	611	1,094	469	2,172	540	618	191	117	188	2,908	452
1997	1,461	656	1,433	546	2,893	603	786	185	212	169	3,891	497
1998	1,333	643	1,194	521	2,527	586	506	164	135	150	3,169	502
1999	1,422	649	1,195	518	2,617	590	419	200	149	187	3,185	525
2000	1,816	628	1,503	500	3,319	571	513	125	120	118	3,951	504
2001	1,706	680	1,300	491	3,006	601	262	86	101	87	3,368	555
2002	1,817	614	1,288	432	3,105	538	622	76	61	80	3,787	462
2003	1,634	609	1,230	429	2,864	534	422	95	84	91	3,370	471
2004	1,639	627	1,136	487	2,775	571	727	200	113	199	3,615	482
2005	2,235	634	1,521	507	3,756	583	467	164	106	121	4,330	533
2006	1,874	637	1,263	503	3,136	583	267	154	86	137	3,489	548
2007	1,875	627	1,372	482	3,248	565	364	155	63	138	3,674	522
2008	1,676	661	1,338	543	3,015	609	494	224	165	180	3,674	547
2009	2,078	671	1,625	536	3,703	612	307	171	85	143	4,095	574
2010	2,051	628	1,538	501	3,589	574	274	215	124	174	3,986	545
2011	1,920	708	1,427	542	3,347	637	373	265	155	219	3,874	592
2012	2,292	884	1,726	625	4,018	773	270	319	99	272	4,387	738
2013	2,417	852	1,829	623	4,246	754	328	255	127	222	4,700	713
2014	2,141	893	1,753	596	3,894	759	156	233	95	234	4,145	744
2015	2,041	790	1,664	540	3,705	679	92	248	71	253	3,868	672
2016	2,279	918	1,753	598	4,031	780	98	214	98	153	4,227	763

Source: USDA, National Agricultural Statistics Service, Pacific Regional Office – California

### California Grape Crush, Dollars per Ton 2007-2016



Source: USDA, National Agricultural Statistics Service, Pacific Regional Office - California

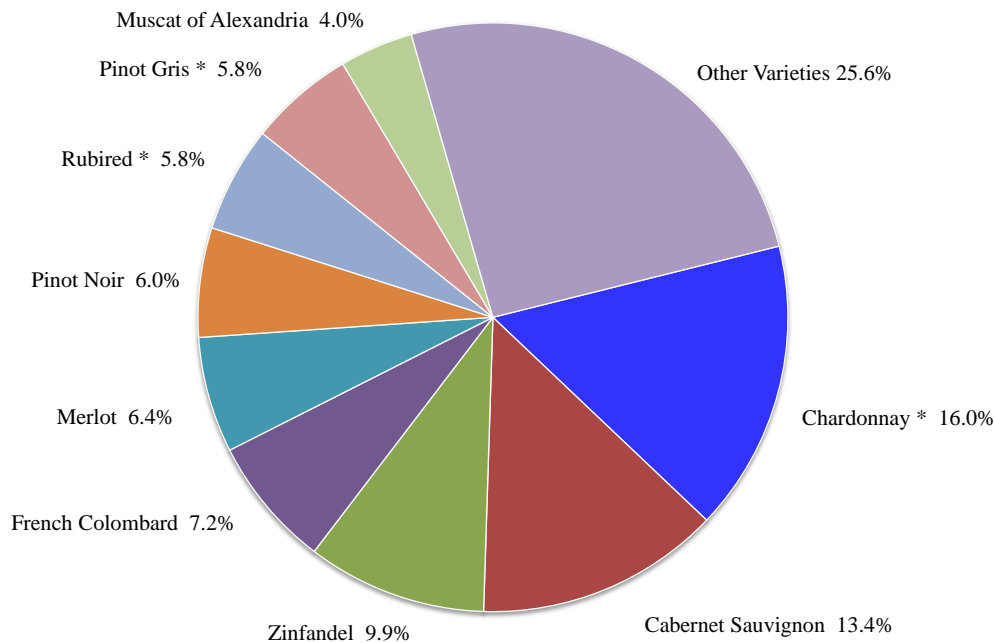
## LEADING GRAPE VARIETIES AND DISTRICTS

In 2016, Chardonnay continued to account for the largest percentage of the total crush volume with 16.0 percent. Cabernet Sauvignon accounted for the second leading percentage of crush with 13.4 percent. Thompson Seedless, the leading raisin grape variety crushed for 2016, held 2.0 percent of the total crush.

District 13, (Madera, Fresno, Alpine, Mono, Inyo Counties; and Kings and Tulare Counties north of Nevada Avenue (Avenue 192)), had the largest share of the State’s crush, at 1,331,936 tons. The average price per ton in District 13 was \$301.85.

Grapes produced in District 4 (Napa County) received the highest average price of \$4,685.58 per ton, up 7.8 percent from 2015. District 3 (Sonoma and Marin counties) received the second highest return of \$2,590.23, up 6.1 percent from 2015. The 2016 Chardonnay price of \$886.00 was up 12.4 percent from 2015, and the Cabernet Sauvignon price of \$1,468.34 was up 11.5 percent from 2015. The 2016 average price for Zinfandel was \$604.52, up 5.1 percent from 2015, while the French Colombard average price was up 3.4 percent from 2015 at \$260.82 per ton.

### Leading Grape Varieties Crushed in California Percent of Total 2016 Crush <sup>1/</sup>



Source: USDA, National Agricultural Statistics Service, Pacific Regional Office - California

\*Synonyms for variety names are shown on Page 5 of the *California Grape Crush Report, Final 2016*.

<sup>1/</sup> Percentages may not add to 100%, due to rounding.

## EXPLANATION OF TABLES

**TABLE 1** is a summary of the 2016 crop State totals by grape type and varieties that are shown in detail by grape pricing districts in Tables 2 through 6. State totals and averages for 2015 are shown for comparison.

**TABLE 2** includes over-the-scale fresh tonnage of all grapes crushed by California processors from the 2016 crop. Over-the-scale fresh weight tonnage includes materials other than grapes (MOG) and defects. This table is broken down by the 17 grape pricing districts and by variety. State totals for 2015 are shown for comparison. Crushed tonnage includes all grapes crushed whether: grown and crushed by processors; purchased and crushed by processors; crushed by cooperatives, juice manufacturers, etc.; or crushed for others, including growers.

**TABLE 3** shows the weighted average degrees Brix for all grapes crushed (TABLE 2) by California processors from the 2016 crop. The weighted average degrees Brix is reported by grape pricing districts and variety. State averages for 2015 are shown for comparison.

**TABLE 4** includes net weight fresh tonnage of all grapes purchased for wine, concentrate, juice, vinegar, and beverage brandy by California processors from the 2016 crop. Net weight fresh tonnage does not include material other than grapes (MOG) and defects or other weight adjustments deducted from gross weight. The purchased tonnage is reported by variety and grape pricing districts. State totals for 2015 are shown for comparison. TABLE 4 does not include tonnage purchased as distilling material other than beverage brandy; this is shown in TABLE 7. Prices for all tonnage shown in this table are final and not subject to change. Grapes pooled by cooperatives, those grown by processors and used for their own production and grapes crushed to growers' accounts are not included.

**TABLE 5** shows the weighted average degrees Brix for all grapes purchased for wine, concentrate, juice, vinegar, and beverage brandy (TABLE 4) by California processors from the 2016 crop. The weighted average degrees Brix is reported by grape pricing districts and variety. State averages for 2015 are shown for comparison. TABLE 5 does not include degrees Brix of tonnage purchased as distilling material other than beverage brandy; this is shown in TABLE 7. Grapes pooled by cooperatives, those grown by processors and used for their own production and grapes crushed to growers' accounts are not included.

**TABLE 6** gives the weighted average price per ton, delivered basis, of all tonnage purchased for wine, concentrate, juice, vinegar, and beverage brandy (TABLE 4) by California processors from the 2016 crop. The weighted average prices are reported by variety, and grape pricing districts. State averages for 2015 are shown for comparison. TABLE 6 does not include prices of tonnage purchased as distilling material other than beverage brandy; this is shown in TABLE 7. Prices shown in this table are final and not subject to change. Grapes pooled by cooperatives, those grown by processors and used for their own production and grapes crushed to growers' accounts are not included.

Weighted average prices reflect final prices through January 10, 2017 and include any Brix adjustments, bonuses or allowances. Prices are equivalent to delivered basis in the area grown including normal within-area hauling allowances. Purchases made on a roadside basis include the usual hauling allowance for local delivery in the area grown. Out-of-area purchases made on a delivered basis do not include extra hauling allowances for delivery outside the area.

The next example indicates the method used for calculating weighted averages.

The following two purchases were made.

Variety	District	Tons	Degrees Brix	Base Price	Price Paid Per Ton	Acceptable Brix Limits	Brix Adjustment Factors	Brix Adjustment Limits
<i>Petite Sirah</i>	1	155.5	20.6	\$450.00	\$364.50	19 - 25	+ or - 10%	Base 22, Min 20, Max 24
<i>Petite Sirah</i>	1	20.5	19.0	\$450.00	\$418.50	19 - 25	+ or - 10%	Base 22, Min 20, Max 24

*Note: The variety, district, base price, and Brix Adjustment Factors (including Brix limits) are the same. The tons purchased, degrees Brix, and price paid per ton are the only differences in this example.*

**Step 1:** Multiply the tons by the Brix for each lot purchased and then add the products to get the total. Also, add the tons purchased.

Variety	District	Tons	Degrees Brix	Total (Tons X Brix)
<i>Petite Sirah</i>	1	155.5	20.6	155.5 X 20.6 = 3,203.3
<i>Petite Sirah</i>	1	20.5	19.0	20.5 X 19.0 = 389.5
<b>TOTALS</b>		<b>176.0</b>		<b>3,592.8</b>

**Step 2:** Divide the total (3,592.8) by the total tons purchased (176.0) to get the **Weighted Average Degrees Brix**.

$$\frac{3,592.8}{176.0} = 20.4$$

**Step 3:** Multiply the purchased tons by the Price Paid Per Ton for each lot purchased and then add the products to get the total.

Variety	District	Tons	Price Paid Per Ton	Total (Tons X Brix)
<i>Petite Sirah</i>	1	155.5	\$364.50	155.5 X 364.50 = 56,679.8
<i>Petite Sirah</i>	1	20.5	\$418.50	20.5 X 418.50 = 8,579.3
<b>TOTALS</b>		<b>176.0</b>		<b>65,259.1</b>

**Step 4:** Divide the total (65,259.1) by the total tons purchased (176.0) to get the **Weighted Average Price Per Ton**:

$$\frac{65,259.1}{176.0} = \$370.79$$

**TABLE 7** shows all grape tonnage purchased as distilling material other than beverage brandy by California processors from the 2016 crop. The tonnage, weighted average degrees Brix and price per ton are shown by grape type and variety. State totals and averages for 2015 are given for comparison.

**TABLE 8** shows base prices paid to growers by Brix adjustment factors, purchased tonnage, type, variety and reporting district where grown. Weighted average base prices and total purchased tonnage are included.

The Brix adjustment factors determine adjustments to base prices to compensate for sugar variations. In this report, adjustments are expressed in dollars per ton, or percent of base price per degree variance from the established Brix base. Occasional lots are traded on price per degree Brix as delivered.

**TABLE 9** includes tonnage of all grapes crushed to growers' accounts by California processors from the 2016 crop. Growers retained ownership of these grapes at the time of crushing. This tonnage is reported by grape pricing district and variety. Comparisons with 2015 are shown. (*Table 9 only appears in the Final Grape Crush Report.*)

**TABLE 10** gives the weighted average price per ton, delivered basis, of all tonnage purchased from non-related sources for wine, concentrate, juice, vinegar, and beverage brandy (TABLE 4) by California processors from the 2016 crop. The weighted average prices are reported by variety, and grape pricing districts. State averages for 2015 are shown for comparison. TABLE 10 does not include prices of tonnage purchased as distilling material other than beverage brandy, this is shown in TABLE 7. Prices shown in this table are final and not subject to change. Grapes pooled by cooperatives, those grown by processors and used for their own production and grapes crushed to growers' accounts are not included.

Non-Related Purchased Tons: Excludes tonnage of grapes purchased from a grower if:

- The grower or an affiliate of the grower, or both the grower and the affiliate of the grower, owned, directly or indirectly, at least 5 percent of the indicia of ownership or voting authority of the winery (processor);
- The winery (processor) or an affiliate of the winery, or both the winery and the affiliate of the winery, owned, directly or indirectly, at least 5 percent of the indicia of ownership or voting authority of the grower;
- The winery (processor) or an affiliate of the winery, or both the winery and the affiliate of the winery, provided long-term financing to the grower in exchange for rights or options to purchase a significant portion of the grower's harvest.

#### Grape Variety Synonyms

Alicante Bouschet \*-Alicante  
 Beauty Seedless \*-Black Beauty  
 Black Prince \*-Rose of Peru  
 Blaufraenkisch \*-Lemberger  
 Burger \*-Monbadon  
 Chardonnay \*-Pinot Chardonnay, Chardonnay  
 Musque  
 Cinsaut \*-Black Malvoisie, Black Malvasia  
 Crimson Seedless \*-Red Crimson  
 Emerald Seedless \*-Black Seedless  
 Flame Seedless \*-Red Flame  
 Gamay (Napa) \*-Gamay, Valdiguie  
 Gray Riesling \*-Trousseau Gris  
 Grenache \*-Grenache Noir  
 Italia \*-Muscat Italia

Malaga \*-White Malaga  
 Mataro \*-Mourvedre  
 Meunier \*-Pinot Meunier  
 Moscato Giallo \*-Muscat Yellow  
 Muscat Blanc \*-Muscat Canelli,  
 Muscat Blanc A Petits Grains  
 Muscat Hamburg \*-Black Muscat  
 Negrette \*-Pinot St. George  
 Nero D'Avola \*-Calabrese  
 Other Red Wine -Lenoir, Gros Verdot, Criolla,  
 Ruby Royal, Tinta Amarella, Cynthiana  
 Tinta Negra Mole  
 Other White Wine -Aligote, Vidal  
 Palomino \*-Golden Chasselas  
 Pinot Gris \*-Pinot Grigio

Princess \*-Melissa  
 Red Globe \*-Rose Ito  
 Refosco \*-Mondeuse  
 Ribolla Gialla \*-Rebolla  
 Rubired \*-Tintoria  
 Ruby Seedless \*-King Ruby  
 Sangiovese \*-Sangioveseto, Brunello  
 Sauvignon Vert \*-Muscadelle  
 St. Emilion \*-Ugni Blanc, Trebbiano  
 Syrah \*-French Syrah, Shiraz, Syrah Noir  
 Tempranillo \*-Tinta Roriz, Valdepenas  
 Touriga Nacional \*-Touriga  
 Trousseau \*-Bastardo  
 Vermentino \*-Vennentino  
 White Riesling \*-Johannisberg Riesling, Riesling

\* indicates the published name includes more than one variety name