



International Citrus &  
Beverage Conference

September 19-22, 2023

Clearwater Beach, FL

# California Citrus Processing

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9/26/2023





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# California Citrus Processing

## Topics

- **Economic impact of agriculture and citrus in California**
- **The region diverse citrus acreage**
- **Economic impact and challenges of the citrus industry**
- **Citrus production for the processing side**
- **Processing Capabilities**



# California Citrus Processing

## Economic Impact of California's Agriculture

- *Agriculture* is part of a diverse economic activities in California, from *farm to table*, to manufacturing, health care, information and space technology, among many.
- California state *GDP* <sup>(1)</sup> is estimated at \$3.7 trillion in 2023 followed by Texas at \$2.4 trillion, New York at \$2.1 trillion and Florida at \$1.5 trillion.
- California *farmers* produced about \$51.1 billion worth of *agricultural commodities* in 2021 <sup>(2)</sup> representing 12 % of the total US farm sector cash receipt, Texas farmers around 6% at \$24.9 billion and Florida farmers accounting for 1.7 % at \$7.5 billion.
- These commodities in turn are the reason why California has a such a large *food and beverage* processing industry.
- Agriculture and closely-related industries account for about half million jobs which represents over 2% of total *employment*. <sup>(3)</sup>
- *California Citrus* is a major contributor to the economic value of the agricultural sector and accounts for \$2.5 billion or 5 % of the state agricultural value. <sup>(4)</sup>

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(1) U.S. Bureau of Economic Analysis (BEA). Bureau of Economic Analysis. Retrieved 10 April 2022  
 (2) USDA Economic Research Service cash receipts, September 20220  
 (3) CA Agricultural Employment Published Annual Averages Current Economic Statistics Benchmark 2021  
 (4) 2020-21 are from the Citrus Fruits Summary released in September 2021.

Top 5 Agricultural States in Cash Receipts, 2021

Rank	State	Crop Cash Receipts <sup>1</sup> \$1,000
<b>United States</b>		<b>433,569,038</b>
1	California	51,109,546
2	Iowa	34,626,720
3	Nebraska	26,345,219
4	Texas	24,898,569
5	Illinois	21,720,187

<sup>1</sup> Based on USDA Economic Research Service cash receipts, September 2022 release.

Top 20 Commodities in California, 2019-2021

Commodity	2019		2020		2021	
	\$1,000	Rank	\$1,000	Rank	\$1,000	Rank
Dairy products, Milk	7,382,830	1	7,265,456	1	7,571,954	1
Grapes	5,398,164	3	4,488,553	4	5,229,902	2
Almonds (shelled)	6,169,100	2	5,251,410	2	5,028,320	3
Miscellaneous crops <sup>2</sup>	5,054,471	4	4,875,731	3	4,955,667	4
Cattle and calves	3,064,300	5	2,736,559	6	3,114,550	5
Berries, All Strawberries	2,286,330	6	2,211,430	8	3,023,230	6
Pistachios	2,082,210	7	2,622,950	7	2,910,600	7
Lettuce, All	1,841,423	8	3,067,771	5	2,029,089	8
Tomatoes, All	1,174,395	10	1,117,840	9	1,181,966	9
Walnuts	1,237,950	9	948,000	11	1,022,250	10
Rice	913,602	12	946,293	12	1,003,864	11
Broilers	843,036	13	690,034	17	996,023	12
Floriculture	1,015,012	11	967,206	10	962,498	13
Oranges, All	699,458	17	858,093	13	901,281	14
Hay, All	786,891	14	678,561	18	839,453	15
Tangerines	679,638	19	795,034	14	815,089	16
Carrots, All	708,872	16	772,549	16	776,367	17
Lemons	688,163	18	614,933	19	638,250	18
Broccoli	746,918	15	782,122	15	631,455	19
Other animals/products	578,569	20	550,316	20	550,316	20

<sup>1</sup> Total value is based on USDA Economic Research Service cash receipts, September 2022 release.

<sup>2</sup> Includes nursery/greenhouse crops (excluding Floriculture), Christmas trees, seed crops, and miscellaneous field, vegetable, berry, tree fruit, and nut crops. Beginning in 2021, industrial hemp is included.



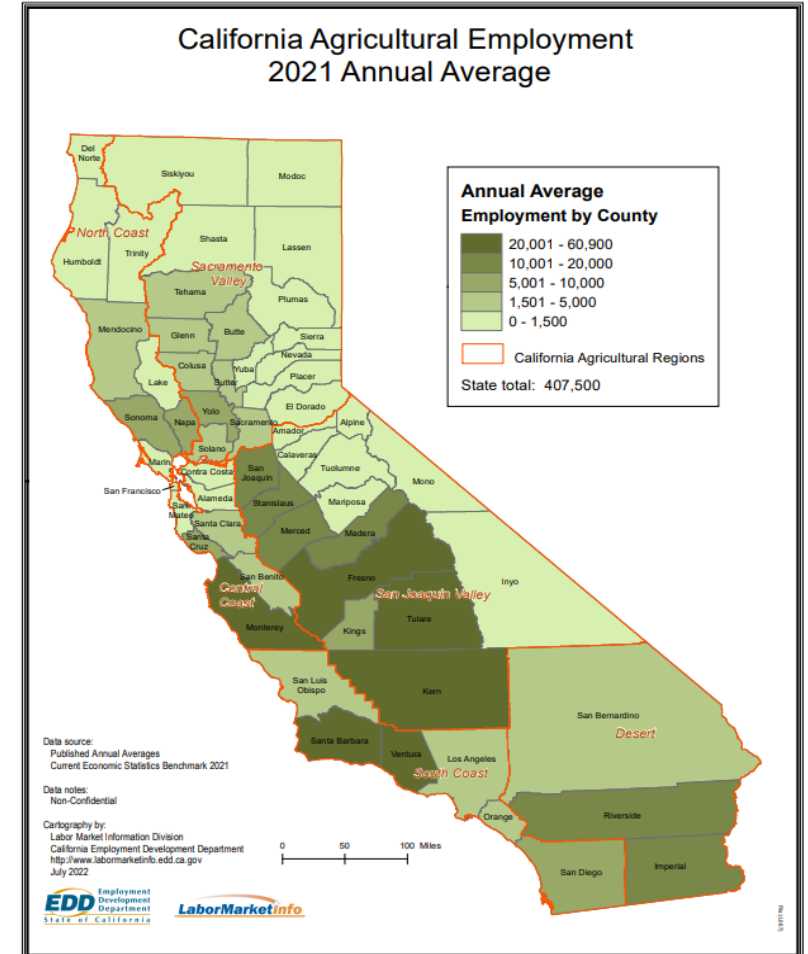
# California Citrus Processing

## California Citrus Acreage

Bearing Acreage by Commodity	California	Arizona	Total
Orange	136,038		136,038
Mandarin	63,282		63,282
Lemon	47,207	6,500	53,807
Grapefruit	9,002		9,002
<b>Total</b>	<b>255,529</b>	<b>6,500</b>	<b>262,129</b>

- Oranges, mandarins, lemons, and grapefruit, accounted for 2.3% of total crop acres in the state with a total citrus acreage of 276 thousand acres
- Estimated full time equivalent jobs in the California Citrus industry in 20/21 totaled 24,247 jobs.

Total Acreage by Region	Oranges	Mandarines	Lemons	Grapefruit	Grand Total
Central Valley	128,098	62,124	16,537	3,751	210,510
Coastal Region	7,298	1,872	25,329	1,111	35,610
Desert	3,830	2,519	10,365	4,858	21,572
Arizona			6,900		6,900
North	361	346			707
All Other Counties	228	290		107	625
<b>Grand Total</b>	<b>139,815</b>	<b>67,151</b>	<b>59,131</b>	<b>9,827</b>	<b>275,924</b>





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Sum of Total Acreage		Column						
Acreage by main variety		D1	D2	D3	D4	D5	All Other Counties	Grand Total
<b>Oranges</b>		<b>128,098</b>	<b>7,298</b>	<b>3,830</b>	<b>361</b>		<b>228</b>	<b>139,815</b>
<b>Navel</b>		<b>109,794</b>	<b>940</b>	<b>2,318</b>	<b>361</b>		<b>176</b>	<b>113,589</b>
Seedless Winter Orange		80,170	940	2,318	361		176	83,965
Cara Cara		9,482						9,482
Blood		991						991
Lates as Autumn Gold, Chislett, Lanes, Powells among other \		19,151						19,151
<b>Valencia</b>		<b>18,304</b>	<b>6,358</b>	<b>1,512</b>			<b>52</b>	<b>26,226</b>
Seeded Summer Orange		18,304	6,358	1,512			52	26,226
<b>Mandarines</b>		<b>62,124</b>	<b>1,872</b>	<b>2,519</b>	<b>346</b>		<b>290</b>	<b>67,151</b>
<b>Mandarin &amp; Mandarin Hybrids</b>		<b>62,124</b>	<b>1,872</b>	<b>2,519</b>	<b>346</b>		<b>290</b>	<b>67,151</b>
Minneola & Tangelos		5,275						5,275
Pixie			264					264
Gold Nugget		1,249	624					1,873
Fairchild		412						412
Satsuma		2,115						2,115
Shasta Gold		111						111
Murcott		9,668						9,668
Clementines as Algerian, Caffin, Clemenules, others		10,376						10,376
Tangos Tangerine		19,671						19,671
All Other Varieties Tangors, Temple, Giuletta, Royal, others		13,247	984	2,519	346		290	17,386
<b>Lemons</b>		<b>16,537</b>	<b>25,329</b>	<b>10,365</b>		<b>6,900</b>		<b>59,131</b>
<b>Lemon</b>		<b>16,443</b>	<b>25,082</b>	<b>10,145</b>		<b>6,900</b>		<b>58,570</b>
Eureka & Lisbon		16,443	25,082	10,145		6,900		58,570
<b>Lime</b>		<b>94</b>	<b>247</b>	<b>220</b>				<b>561</b>
Mexican Lime		94	247	220				561
<b>Grapefruit</b>		<b>3,751</b>	<b>1,111</b>	<b>4,858</b>			<b>107</b>	<b>9,827</b>
<b>Grapefruit</b>		<b>2,699</b>	<b>1,111</b>	<b>4,786</b>				<b>8,596</b>
Rio Red		-	310	935				1,245
Ruby			801					801
Ruby Red				1,222				1,222
Star Ruby		2,668		238				2,906
All Other Varieties		31		2,391				2,422
<b>Pummelos &amp; Hybrids</b>		<b>1,052</b>	<b>-</b>	<b>72</b>			<b>107</b>	<b>1,231</b>
Melogold, Oro Blanco, Chandler, others		1,052	-	72			107	1,231
<b>Grand Total</b>		<b>210,510</b>	<b>35,610</b>	<b>21,572</b>	<b>707</b>	<b>6,900</b>	<b>625</b>	<b>275,924</b>

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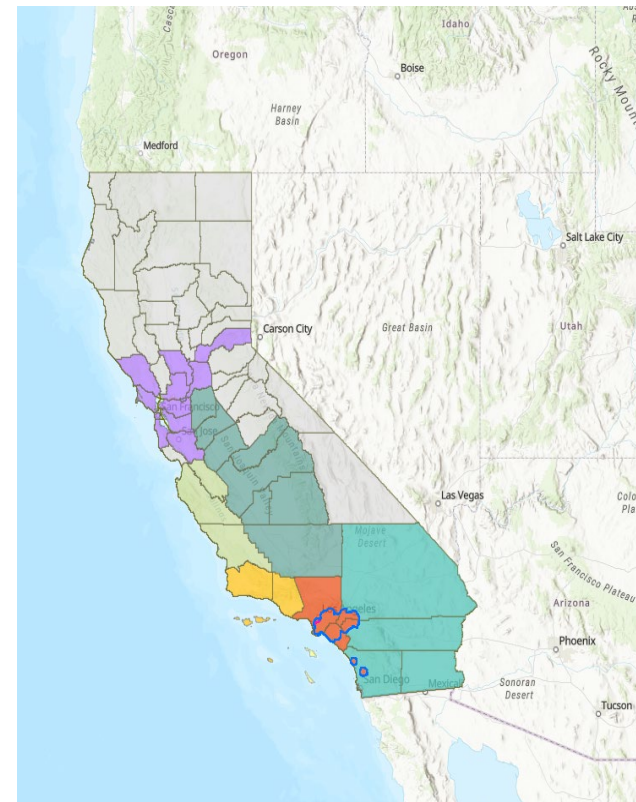


# California Citrus Processing

## California Citrus Economic Impact <sup>(1)</sup>

- The value of the state citrus production 20/21 marketing year was \$3.63 billion.
- Total economic impact of the citrus industry in California’s economy was \$7.6 billion
- The California citrus industry value-added \$1.9 billion to California’s state GDP in 2020
- Estimated wages paid by the California citrus industry income in 20/21 totaled \$759 million.
- A 20% reduction on citrus acreage would cause a loss of 8,213 jobs, \$214 million in employee income, and reduce state GDP by \$569 million.

HLB Citrus Quarantines



Asian Citrus Psyllid (ACP) IPM Control

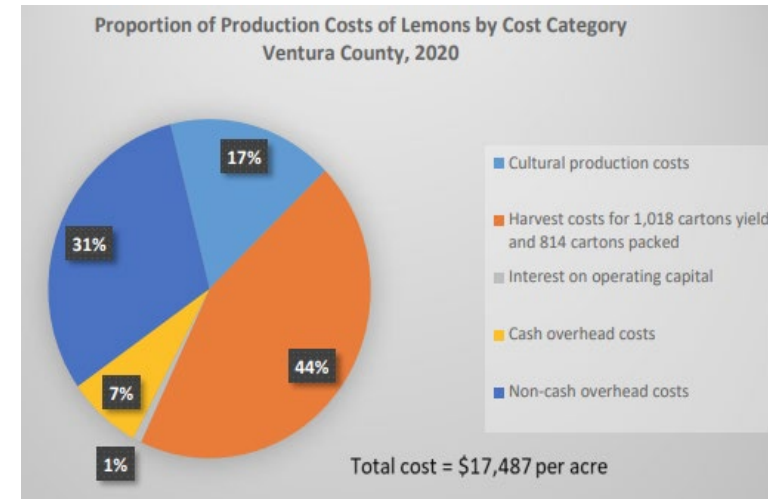




# California Citrus Processing

## California Citrus Challenges

- Increasing costs more than doubled the production cost per acre in the last 10 years in part due new regulations in labor, food safety, water management, and acerbated now by the current economic environment.
- Fertilizers, fuel, agrochemicals, water, labor, equipment, packing, packaging, shipping, transportation, being the main drivers on the cost to grow and process citrus.
- Managing On / Off bearing seasons, threats on HLB / ACP Control front now that HLB disease is increasing in Mexico.
- Weather events as drought, freeze, flood, La Nina, El Nino are always present.
- Despite these challenges, the industry is optimistic for this past season and the one ahead.





# California Citrus Processing

## USDA Estimates of Production in US TONS terms by State 22/23 season

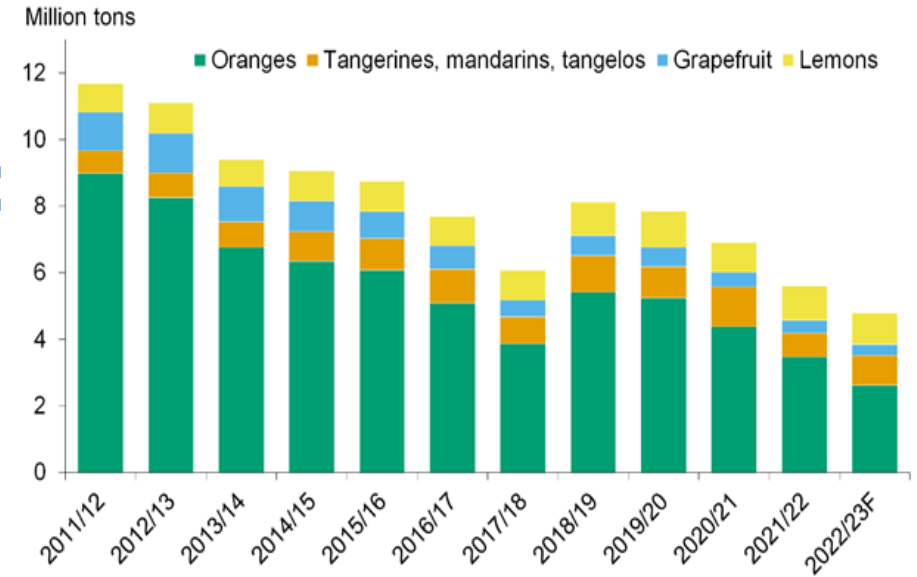
TONS	California	Arizona	Grand Total
Orange	1,760,000		1,760,000
Mandarin	880,000		880,000
Lemon	800,000	56,000	856,000
Grapefruit	168,000		168,000
<b>Grand Total</b>	<b>3,608,000</b>	<b>56,000</b>	<b>3,664,000</b>



Florida	Texas	Grand Total
713,250	48,025	761,275
22,800		22,800
-	-	-
76,925	89,200	166,125
<b>812,975</b>	<b>137,225</b>	<b>950,200</b>



Total U.S. citrus production is forecast to be 13 percent below last year's levels



F = Forecast.  
 Source: USDA, Economic Research Service based on data from the USDA, National Agricultural Statistics Service, *Crop Production*, March 2023 issue, and *Citrus Fruit Summary*, various issues.

### US Citrus down overall -15% from previous season

- Orange -25%
- Grapefruit -12%
- Lemons -9%
- Mandarin +23%





# California Citrus Processing

- Florida down -60%
- California Citrus production **overall** up 5% mostly due to a rainy season with over 90 million 90# Boxes equivalent produced.

*The proportion of citrus that is packed for fresh market in California is on average:*

- 80% of Oranges,
- 75% of Grapefruit,
- 74% of Lemons,
- 71% of Mandarins

*This differentiates California at different levels from Florida, Texas, Brazil, Mexico, Argentina and other countries where over 70-85% of their production goes to processing not fresh.*

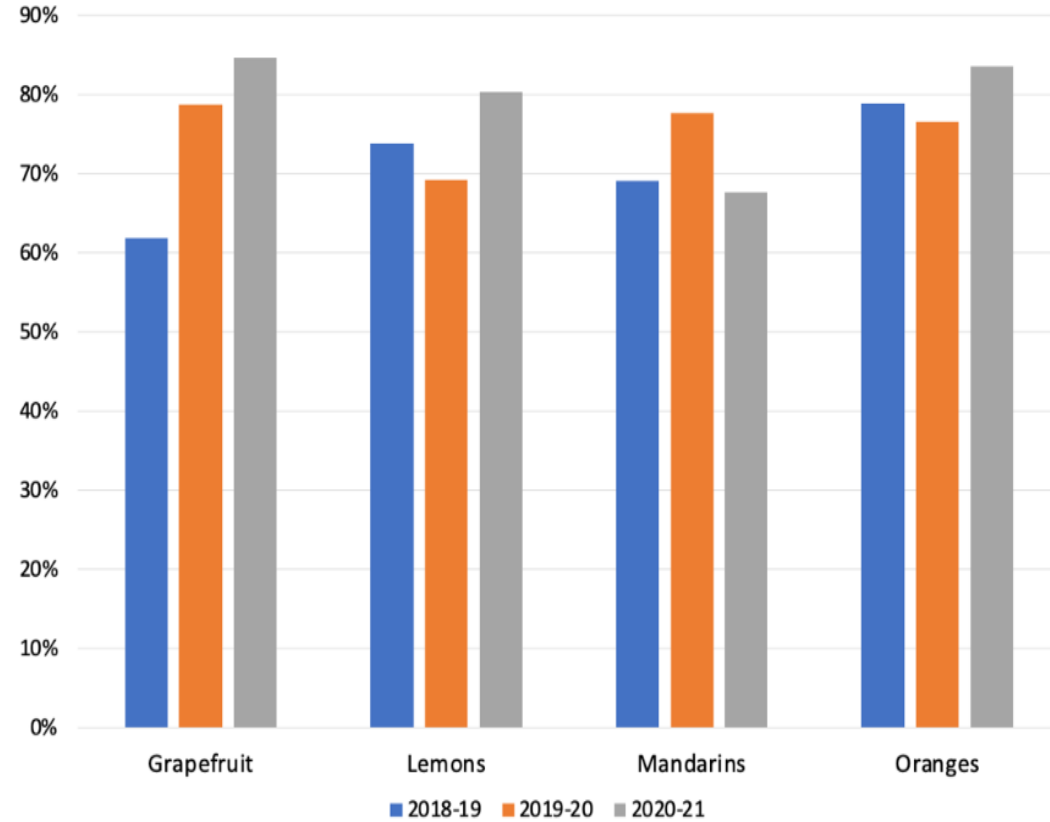
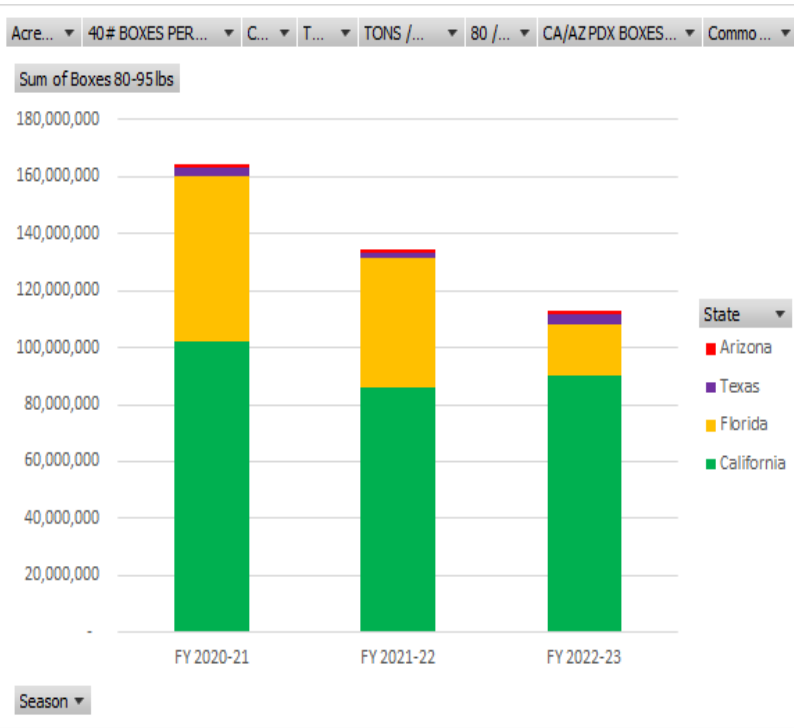


Figure 1. Proportion of California Citrus Packed for Fresh Market

Source: Citrus Fruits 2021 Summary. USDA-NASS. ISSN: 1948-9048, September 2021.

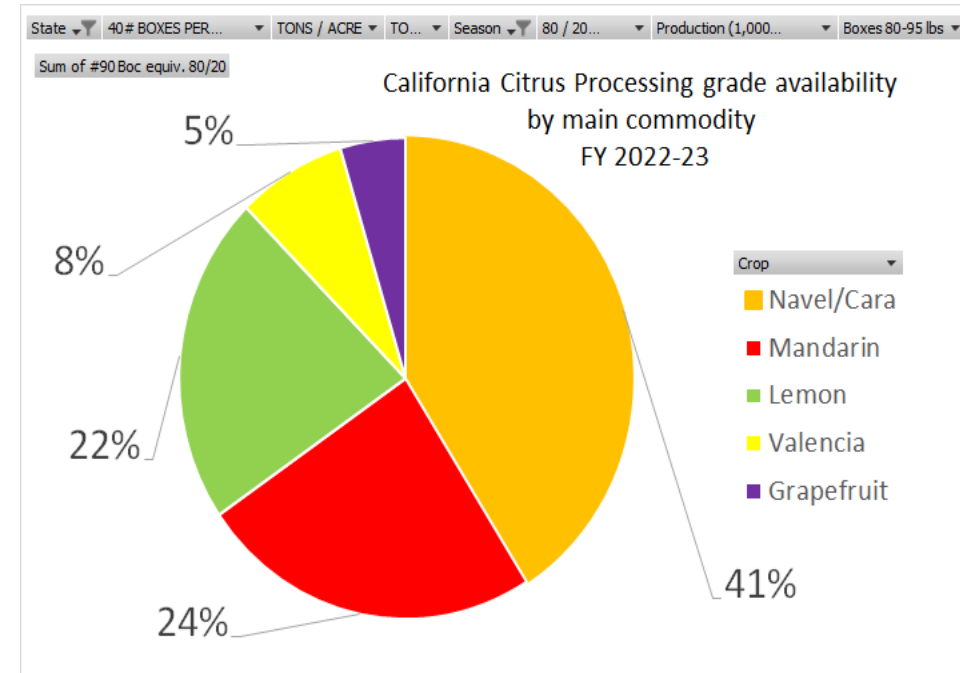
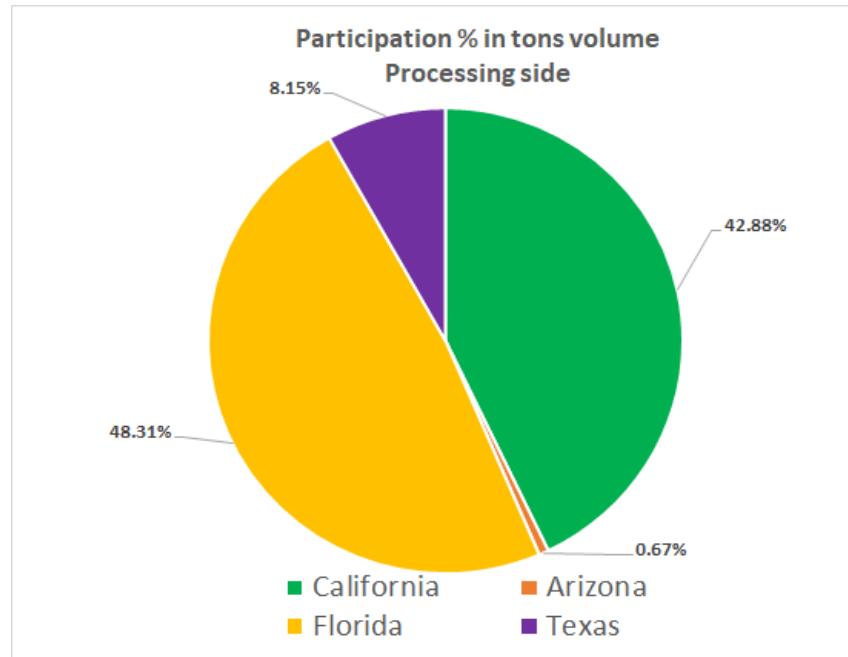
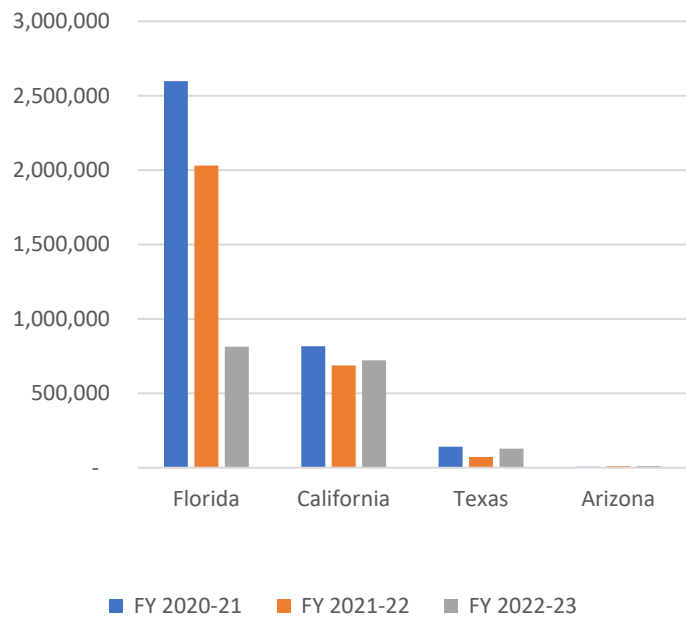




# California Citrus Processing

## California Citrus Processing utilization between 17 to 20 million 90# Boxes equivalent

US Citrus Production by main state Processing Tons per season



- USDA frozen concentrate price, not less than 62.5° Brix has increased over 100% since Sep'21

- Cost of Navel oranges for processing in California has increased over 160% same period, Mandarins even more.



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# California Citrus Processing

Sustainability programs water & waste management



Grower Packer Shipper Cost of doing business



Grower return per bin



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# California Citrus Processing

- Processing capabilities





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# California Citrus Processing

- Storage, shipping and logistics capabilities





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