

# SALAD BOWL OF THE WORLD





## MONTEREY COUNTY CROP & LIVESTOCK REPORT

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of Food & Agriculture  
Karen Ross, Secretary

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In accordance with Sections 2272 and 2279 of the California Food and Agricultural Code, I am pleased to announce the release of the 2021 Annual Crop and Livestock Report for the County of Monterey. This report reflects a production gross value of \$4,100,240,000 which is an increase of 4.8% from 2020. It is important to note that the values represented in this report reflect gross value of agricultural commodities grown in Monterey County, and does not consider costs associated with labor, field preparation, planting, irrigating, harvesting, distribution, and other production activities. As is always the case,

we saw some crops increase in value while others decreased in value. The following are the major increases and decreases.

Strawberries, in 2021, continued to maintain our top crop spot with an increase of 4.9% for a value of \$968,086,000. Similarly, leaf lettuce continued as the 2nd most valuable crop at \$741,598,000 with an increase of 4.1% and head lettuce as the 3rd most valuable crop at \$451,556,000 with an increase of 5.4%. Broccoli remained at 4th place ranking despite a 9.4% decrease to \$309,490,000.

Vegetable Crops category saw an increase in value of 1.7% to \$2,568,381,000. Fruits and Nuts category had an increase of 14.3% to \$1,285,767,000 due in part to a rebound in Wine Grape values. Wine Grapes celebrated a rebound increase of 106.2% or \$112,600,000 to reach a total for red and white varieties of \$218,591,000, ranking it as the 5th most value crop in 2021. Wine Grape production per acre was well above average. Livestock, Seeds and Field Crops all saw increases of 2.3%, 4.8% and 7.6% respectively.

In addition, Cannabis production saw an increase in value of \$134.1 million to \$618,193,000, although product values decreased during the fourth quarter of 2021 and remained low. Industrial Hemp crop production increased as more acres were planted, although market prices dropped for a 39.6% decrease in total value.

This year's Crop and Livestock Report highlights the diversification of growing many different crops in Monterey County, and the beneficial impact that diversity provides the local Agricultural Industry in the form of economic strength and resilience. The theme of the Report "Salad Bowl of the World" reflects the diversification of crops grown within the Salinas Valley. This is a phrase coined by George Cominos, a prominent hotel owner in Salinas at the turn of the century.

I would like to express my appreciation to the agricultural industry in providing us with vital information to make this report possible. I am especially appreciative of all the hard work and diligence of our staff and would like to thank Rich Ordonez, Graham Hunting, Shayla Neufeld, Ronnie Capili, Bruce Tanner, as well as those who assisted in compiling, analyzing and reviewing the information.

Respectfully submitted,

Henry S. Gonzales  
Agricultural Commissioner



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# ECONOMIC DIVERSIFICATION IN AGRICULTURE: A DEEPER DIVE

We have all heard the old saying “don’t keep all your eggs in one basket.” If the basket drops, then you might lose everything. This article takes a deep dive into that concept and focuses on three questions:

- 1 Why is economic diversification important?
- 2 How economically diversified is Monterey County agriculture?
- 3 How has agriculture’s level of economic diversification trended over time?

Answers to these questions can shed important light on the agricultural industry’s economic resilience, with implications for the wider county economy and beyond.

## Why is economic diversification important?

Like growers and ranchers everywhere, Monterey County’s agricultural producers face a long list of risks. Examples include: wildfires, droughts, floods, pandemics, crop pests and diseases, food safety-related outbreaks, new regulations, new competitors, labor availability and cost, price drops, and rising costs for fuel, equipment, and other inputs. Any one of these risks can deal a damaging blow. When combined, they can undermine not just an individual operation, but an entire industry.

Take Napa County, for example, where wine grapes account for 99% of the annual agricultural value. When wildfires and a pandemic caused a 51% decline in wine grapes for 2020, the county’s overall agricultural value declined by that same percent. Contrast that with Monterey County: wine grapes dropped 43% in value for 2020, but, because of the county’s agricultural diversification, the agricultural industry’s overall decline was limited to just 11.3%.

## How diversified is Monterey County agriculture?

If economic diversification is like an “insurance policy” against risks, then that raises the question: how economically diversified is Monterey County agriculture?

The Office of the Agricultural Commissioner first answered that question in its 2015 report titled, *Economic Contributions of Monterey County Agriculture*, with an updated edition including additional data published in 2020. Both studies reported agriculture’s Shannon-Weaver Index, a measure of diversification that captures not just the number of different commodities produced, but also their relative abundance.

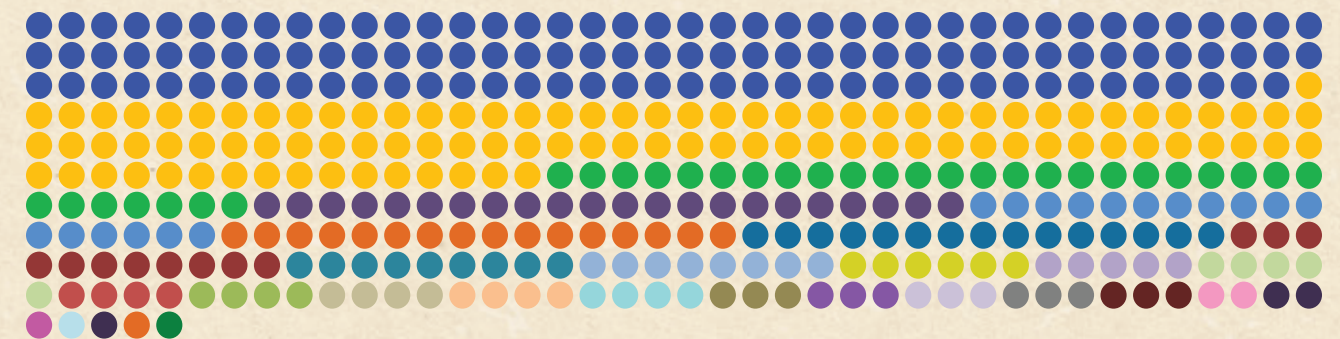
You can find the underlying Shannon-Weaver Index formula and other details in the relevant reports. Since 2015, agricultural officials in twenty other California counties have followed Monterey’s example by reporting their own index.

For 2021, the Shannon-Weaver Index for Monterey County’s agricultural industry was 0.56. The index is quite high compared to other California counties, and indicates Monterey County agricultural production is both diverse and well-distributed across categories.

The high level of diversification no doubt lessened the impact of recent wildfires and even the COVID-19 pandemic. Without it, the county’s total agricultural production value would likely have dropped more than 11.3% for 2020. Diversification can also hasten recovery. For example, it is encouraging to see the agricultural industry’s total production value bounce back with a 4.85% increase for 2021 despite a lingering pandemic.

## RELATIVE DISTRIBUTION OF MONTEREY COUNTY AGRICULTURAL COMMODITIES

Colored circles represent approximately \$10 million each and depict major agricultural commodities’ relative contributions to Monterey County agriculture’s total 2021 farm gate value. The figure does not include minor outlier commodities that contributed less than 0.25% of the county total. The number of commodities produced, and their relative evenness influences the industry’s economic diversification score and its resilience to economic shocks.



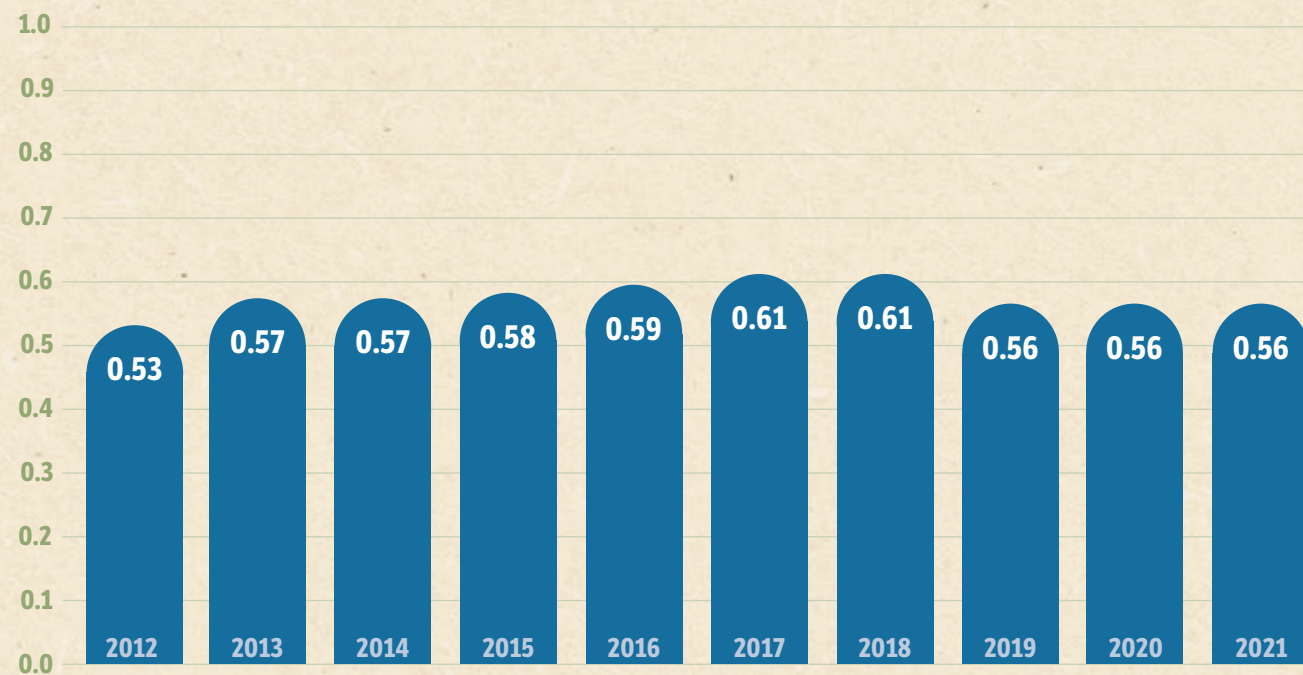
- |                 |                          |                         |                                      |                  |
|-----------------|--------------------------|-------------------------|--------------------------------------|------------------|
| ● Lettuce       | ● Celery                 | ● Vegetable Transplants | ● Carrot                             | ● Rangeland      |
| ● Strawberry    | ● Brussels Sprout        | ● Raspberry             | ● Peas                               | ● Blackberry     |
| ● Broccoli      | ● Misc. Vegetables       | ● Spring Mix            | ● Garlic                             | ● Chard          |
| ● Grapes (Wine) | ● Mushroom               | ● Artichoke             | ● Misc. Livestock & Poultry Products | ● Kale           |
| ● Spinach       | ● Stocker                | ● Cabbage               | ● Onion, Dry                         | ● Anise / Fennel |
| ● Cauliflower   | ● Misc. Nursery Products | ● Lemon                 | ● Cattle & Calves                    | ● Cilantro       |

## How has agriculture's level of economic diversification trended over time?

The figure on this page shows the Shannon-Weaver Index for the past decade. The main thing to note is agriculture's consistent, high number across years. Even the lowest score—0.53 in 2012 on the heels of a strawberry boom—is high compared to most other counties.

The steady, high index stands in contrast to the downward trend many California counties face—places that have become dependent on a few major products such as almonds, berries or wine grapes.

### TEN-YEAR TREND IN MONTEREY COUNTY AGRICULTURE'S ECONOMIC DIVERSIFICATION



An indicator of economic resilience, the **Shannon-Weaver Index** quantifies diversification by combining the number of different commodities produced and their relative economic value. Compared to other California counties, Monterey County agriculture's index is high and holding steady over time.

### Bottom Line

The analysis here points to three key points:

**1 Economic diversification helps buffer against economic shocks such as wildfires, droughts and even pandemics.**

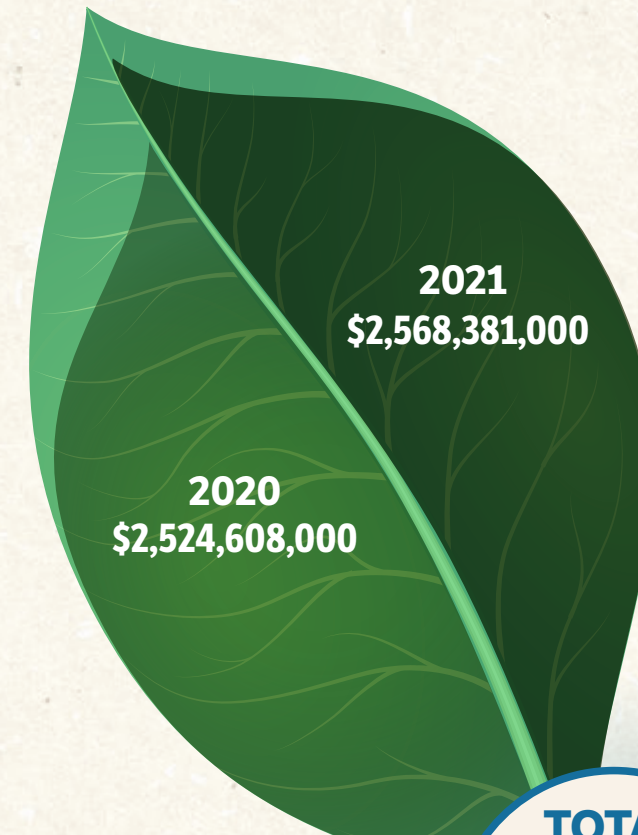
**2 Monterey County's agricultural industry enjoys a high level of economic diversification.**

**3 Agriculture's high level of economic diversification has held steady over time.**

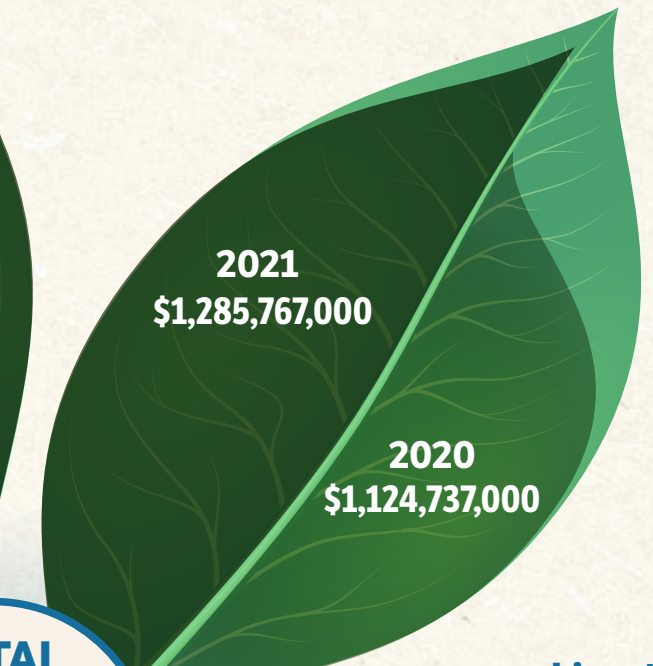
All of this bodes well for the future. In an era of rapid change and rising risks, the agricultural community can take pride and comfort in not having "all of its eggs in one basket."

## GROSS PRODUCTION VALUE

### Vegetable Crops



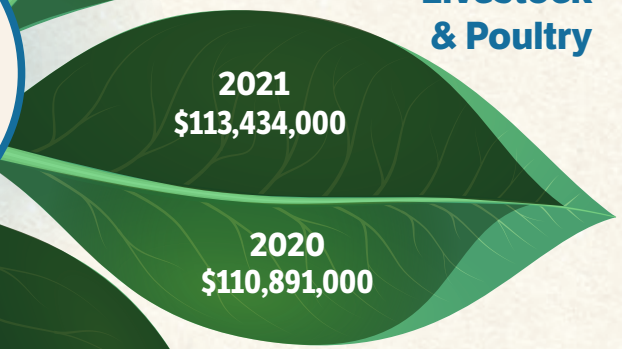
### Fruit & Nuts



### Seed Crops & Apiary



### Livestock & Poultry



### Field Crops



### Nursery Crops



# MONTEREY COUNTY'S MAJOR CROP TRENDS

CROP		2001	2011	2021
ARTICHOKE	Acre	5,943	4,992	3,404
	Value	\$38,473,000	\$49,331,000	\$43,018,000
	CPI Adjusted*	\$61,042,000	\$62,344,000	—
BROCCOLI	Acre	54,889	52,694	38,936
	Value	\$258,962,000	\$297,299,000	\$309,490,000
	CPI Adjusted	\$410,872,000	\$375,724,000	—
CAULIFLOWER	Acre	17,390	17,399	18,404
	Value	\$102,597,000	\$104,970,000	\$155,983,000
	CPI Adjusted	\$162,782,000	\$132,660,000	—
CELERY	Acre	10,030	11,902	9,861
	Value	\$97,988,000	\$182,308,000	\$146,641,000
	CPI Adjusted	\$155,469,000	\$230,400,000	—
GRAPES (WINE)	Acre	38,098	43,043	41,972
	Value	\$207,945,000	\$140,976,000	\$218,591,000
	CPI Adjusted	\$329,928,000	\$178,165,000	—
HEAD LETTUCE	Acre	57,594	34,800	37,808
	Value	\$360,562,000	\$454,238,000	\$451,556,000
	CPI Adjusted	\$572,072,000	\$574,063,000	—
LEAF LETTUCE	Acre	53,745	97,979	57,483
	Value	\$289,352,000	\$777,418,000	\$741,598,000
	CPI Adjusted	\$473,369,000	\$982,496,000	—
MUSHROOM	Pounds	48,146,000	41,128,000	38,023,000
	Value	\$65,479,000	\$78,966,000	\$78,327,000
	CPI Adjusted	\$103,890,000	\$99,797,000	—
NURSERY	Acre	2,088	1,831	587
	Value	\$178,564,000	\$260,703,000	\$99,778,000
	CPI Adjusted	\$283,312,000	\$329,475,000	—
SPINACH	Acre	13,024	13,900	15,800
	Value	\$77,009,000	\$88,926,000	\$173,882,000
	CPI Adjusted	\$122,183,000	\$112,384,000	—
STRAWBERRY	Acre	6,941	10,992	10,404
	Value	\$276,912,000	\$713,854,000	\$968,086,000
	CPI Adjusted	\$439,352,000	\$902,164,000	—
<b>TOTAL OF MAJOR CROPS ABOVE</b>	<b>Acre</b>	<b>259,752</b>	<b>289,532</b>	<b>234,659</b>
	<b>Value</b>	<b>\$1,962,843,000</b>	<b>\$3,148,989,000</b>	<b>\$3,386,950,000</b>
	<b>CPI Adjusted</b>	<b>\$3,114,271,000</b>	<b>\$3,979,679,000</b>	<b>—</b>

\*Consumer Price Index calculated by US Bureau of Labor Statistics data. <https://www.bls.gov/cpi/regional-resources.htm>

# MONTEREY COUNTY'S TOP CROPS

CROP	2021 CROP VALUE	2021 CROP RANKING	2020 CROP RANKING
STRAWBERRY	\$968,086,000		1
LEAF LETTUCE	\$741,598,000	2	2
HEAD LETTUCE	\$451,556,000		3
BROCCOLI	\$309,490,000	4	4
WINE GRAPE	\$218,591,000		12
SPINACH	\$173,882,000	6	6
CAULIFLOWER	\$155,983,000		5
CELERY	\$146,641,000	8	9
LIVESTOCK & POULTRY	\$113,434,000		10
BRUSSELS SPROUT	\$105,616,000	10	8
NURSERY & FLOWER	\$99,778,000		7
MISC. VEGETABLES	\$85,059,000	12	11
MUSHROOM	\$78,327,000		13
RASPBERRY	\$43,568,000	14	17
SPRING MIX	\$43,268,000		23
ARTICHOKE	\$43,018,000	16	19
CABBAGE	\$38,463,000		14
LEMON	\$35,604,000	18	16
CARROT	\$31,882,000		20
PEAS	\$29,516,000	20	15
GARLIC	\$29,223,000		25
ONION, DRY	\$25,766,000	22	18
RANGELAND	\$21,922,000		21
BLACKBERRY	\$13,305,000	24	22
CHARD	\$12,045,000		26
KALE	\$12,019,000	26	24



# VEGETABLE CROPS

CROP <sup>1</sup>	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL <sup>2</sup>
ANISE / FENNEL	2021	676	18.76	12,700	ton	\$870.00	\$11,049,000
	2020	484	19.14	9,300	ton	\$903.00	\$8,398,000
ARTICHOKE	2021	3,404	9.23	31,400	ton	\$1,370.00	\$43,018,000
	2020	3,616	7.12	25,700	ton	\$1,360.00	\$34,952,000
ASPARAGUS	2021	180	5.46	983	ton	\$1,770.00	\$1,740,000
	2020	330	3.64	1,200	ton	\$1,940.00	\$2,328,000
BOK CHOY	2021	337	10.23	3,450	ton	\$903.00	\$3,115,000
	2020	185	10.69	1,980	ton	\$918.00	\$1,818,000
BROCCOLI, BULK <sup>3</sup>	2021	9,734	—	69,400	ton	\$833.00	\$57,810,000
	2020	10,985	—	75,000	ton	\$877.00	\$65,775,000
BROCCOLI, FRESH	2021	29,202	7.13	208,000	ton	\$1,210.00	\$251,680,000
	2020	32,958	6.85	226,000	ton	\$1,220.00	\$275,720,000
<b>BROCCOLI, TOTAL</b>	<b>2021</b>	<b>38,936</b>	<b>—</b>	<b>277,000</b>	<b>ton</b>	<b>—</b>	<b>\$309,490,000</b>
	<b>2020</b>	<b>43,943</b>	<b>—</b>	<b>301,000</b>	<b>ton</b>	<b>—</b>	<b>\$341,495,000</b>
BRUSSELS SPROUT	2021	6,304	9.11	57,400	ton	\$1,840.00	\$105,616,000
	2020	6,094	10.25	62,500	ton	\$1,860.00	\$116,250,000
CABBAGE, BULK	2021	2,169	—	44,600	ton	\$285.00	\$12,711,000
	2020	2,558	—	51,400	ton	\$317.00	\$16,294,000
CABBAGE, FRESH	2021	2,258	20.57	46,400	ton	\$555.00	\$25,752,000
	2020	2,662	20.10	53,500	ton	\$665.00	\$35,578,000
<b>CABBAGE, TOTAL</b>	<b>2021</b>	<b>4,427</b>	<b>—</b>	<b>91,000</b>	<b>—</b>	<b>—</b>	<b>\$38,463,000</b>
	<b>2020</b>	<b>5,220</b>	<b>—</b>	<b>105,000</b>	<b>—</b>	<b>—</b>	<b>\$51,872,000</b>

<sup>1</sup> Organic production included.  
<sup>2</sup> Totals may not calculate due to rounding.  
<sup>3</sup> Bulk may include one or more of the following: foodservice, processing and/or value added.

## VEGETABLE CROPS (CONTINUED)

CROP <sup>1</sup>	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL <sup>2</sup>
CARROT, BULK	2021	1,416	30.00	42,500	ton	\$396.00	\$16,830,000
	2020	1,270	28.50	36,200	ton	\$380.00	\$13,756,000
CARROT, FRESH	2021	1,307	17.00	22,200	ton	\$678.00	\$15,052,000
	2020	1,170	17.30	20,200	ton	\$680.00	\$13,736,000
<b>CARROT, TOTAL</b>	<b>2021</b>	<b>2,723</b>	<b>—</b>	<b>64,700</b>	<b>ton</b>	<b>—</b>	<b>\$31,882,000</b>
	<b>2020</b>	<b>2,438</b>	<b>—</b>	<b>56,700</b>	<b>ton</b>	<b>—</b>	<b>\$27,492,000</b>
CAULIFLOWER, BULK	2021	2,761	9.85	27,200	ton	\$356.00	\$9,683,000
	2020	2,570	10.85	27,900	ton	\$624.00	\$17,410,000
CAULIFLOWER, FRESH	2021	15,643	9.85	154,000	ton	\$950.00	\$146,300,000
	2020	14,567	10.85	158,000	ton	\$1,110.00	\$175,380,000
<b>CAULIFLOWER, TOTAL</b>	<b>2021</b>	<b>18,404</b>	<b>—</b>	<b>181,000</b>	<b>ton</b>	<b>—</b>	<b>\$155,983,000</b>
	<b>2020</b>	<b>17,138</b>	<b>—</b>	<b>186,000</b>	<b>ton</b>	<b>—</b>	<b>\$192,790,000</b>
CELERY, BULK	2021	986	—	34,100	ton	\$249.00	\$8,491,000
	2020	8,875	—	18,700	ton	\$403.00	\$7,536,000
CELERY, FRESH	2021	8,875	34.58	307,000	ton	\$450.00	\$138,150,000
	2020	9,212	26.97	248,000	ton	\$433.00	\$107,384,000
<b>CELERY, TOTAL</b>	<b>2021</b>	<b>9,861</b>	<b>—</b>	<b>341,000</b>	<b>ton</b>	<b>—</b>	<b>\$146,641,000</b>
	<b>2020</b>	<b>9,905</b>	<b>—</b>	<b>267,000</b>	<b>ton</b>	<b>—</b>	<b>\$114,920,000</b>
CHARD	2021	1,039	5.06	5,260	ton	\$2,290.00	\$12,045,000
	2020	991	6.75	6,690	ton	\$1,440.00	\$9,634,000
CILANTRO	2021	1,276	7.18	9,160	ton	\$1,190.00	\$10,900,000
	2020	613	7.50	4,600	ton	\$1,590.00	\$7,314,000
GARLIC	2021	2,212	6.91	15,300	ton	\$1,910.00	\$29,223,000
	2020	1,030	9.82	10,100	ton	\$1,360.00	\$13,736,000
KALE	2021	1,337	7.59	10,100	ton	\$1,190.00	\$12,019,000
	2020	1,749	8.73	12,900	ton	\$1,080.00	\$13,932,000
LEEK	2021	623	12.28	7,650	ton	\$1,260.00	\$9,639,000
	2020	568	12.09	6,870	ton	\$1,540.00	\$10,580,000

“Economic diversification is like an “insurance policy” against risks. Monterey County’s high level of agricultural diversification no doubt **lessened the impact** of recent wildfires and even the COVID-19 pandemic.”

**VEGETABLE CROPS** (CONTINUED)

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
LETTUCE, TOTAL <sup>4</sup>	2021	95,291	—	—	—	—	\$1,193,154,000
	2020	93,919	—	—	—	—	\$1,141,261,000
MISC. VEGETABLES, TOTAL <sup>5</sup>	2021	18,339	6.38	117,000	ton	\$727.00	\$85,059,000
	2020	21,010	6.68	140,000	ton	\$773.00	\$108,587,000
MUSHROOM	2021	116	—	38,023,000	lbs	\$2.06	\$78,327,000
	2020	115	—	38,893,000	lbs	\$1.95	\$75,841,000
NAPA CABBAGE	2021	472	18.70	8,830	ton	\$1,070.00	\$9,448,000
	2020	254	14.80	3,760	ton	\$967.00	\$3,636,000
ONION, DRY	2021	1,690	31.25	52,800	ton	\$488.00	\$25,766,000
	2020	2,324	27.90	64,800	ton	\$555.00	\$35,964,000
PARSLEY	2021	250	15.83	3,960	ton	\$1,320.00	\$5,227,000
	2020	120	10.02	1,200	ton	\$1,240.00	\$1,488,000
PEAS <sup>6</sup>	2021	3,580	4.38	15,700	ton	\$1,880.00	\$29,516,000
	2020	4,376	—	—	—	—	\$47,470,000
PEPPERS <sup>7</sup>	2021	396	17.90	7,090	ton	\$361.00	\$2,559,000
	2020	518	17.40	9,010	ton	\$394.00	\$3,550,000
RADISH	2021	135	11.91	1,610	ton	\$840.00	\$1,352,000
	2020	168	12.03	2,020	ton	\$1,050.00	\$2,121,000
SPINACH, BULK	2021	14,290	9.00	129,000	ton	\$1,210.00	\$156,090,000
	2020	14,620	9.00	132,000	ton	\$900.00	\$118,800,000
SPINACH, FRESH	2021	1,510	8.50	12,800	ton	\$1,390.00	\$17,792,000
	2020	1,810	8.50	15,400	ton	\$1,460.00	\$22,484,000
SPINACH, TOTAL	2021	15,800	—	—	—	—	\$173,882,000
	2020	16,430	—	—	—	—	\$141,284,000
SPRING MIX	2021	3,991	9.35	37,300	ton	\$1,160.00	\$43,268,000
	2020	1,663	8.96	14,900	ton	\$1,010.00	\$15,049,000
<b>VEGETABLE CROPS TOTAL</b>	<b>2021</b>	<b>229,076</b>					<b>\$2,568,381,000</b>
	<b>2020</b>	<b>235,095</b>					<b>\$2,524,608,000</b>

<sup>4</sup> See Lettuce Production, page 12.

<sup>5</sup> Includes: Arugula, Beet, Broccoli, Cactus Pear, Collard Greens, Cucumber, Fava Bean, Frisée, Green Onion, Herbs, Kohlrabi, Mache, Mustard, Pumpkin, Radicchio, Rapini, Salad Products, Squash, Tomato and Turnip.

<sup>6</sup> Includes: Bulk.

<sup>7</sup> Includes: Bell Pepper, Chili Pepper and Pimento.

**“ Weed abatement activities increased in 2021** to reduce the spread of Impatiens Necrotic Spot Virus (INSV), an emerging economic pest of lettuce in the Salinas Valley. This pathogen is spread by a small ubiquitous insect called Western Flower Thrips.

Contributed by: **Ocean Mist Farms**

## MEDITERRANEAN SALAD WITH ARTICHOKES & SPROUTS

### Ingredients

- 2 **artichokes**, cooked and cut into bite size pieces (stems, bottoms and hearts only)
- 3 cups **Brussels sprouts**, cooked, cooled and thinly sliced
- 2 cups string beans, cooked and cooled
- ½ **purple onion**, thinly sliced
- 1 cup pitted Kalamata olives
- 2 oz **Monterey jack**, pepper jack or blue jack cheeses, cubed
- ¼ cup red wine vinegar
- 4 oz deli style turkey breast, cut into julienne strips
- ¼ cup **olive oil**
- 2 Tbsp fresh basil, chopped
- 2 Tbsp fresh thyme, chopped
- 2 Tbsp Italian **parsley**, chopped
- 8 small Italian marinated peppers
- Salt and pepper, to taste

### Instructions

- 1 In a large bowl combine all the ingredients and toss lightly.
- 2 Plate onto a chilled serving platter and serve. Salad travels well and will stay fresh in an airtight container in an ice chest.

*Pairs well with a Pinot Noir.*





# LETTUCE PRODUCTION

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
<b>HEAD LETTUCE</b>							
NAKED	2021	—	—	5,513,000	ctn <sup>8</sup>	\$13.30	\$73,323,000
	2020	—	—	5,796,000	ctn	\$11.30	\$65,495,000
WRAPPED	2021	—	—	20,128,000	ctn	\$14.20	\$285,818,000
	2020	—	—	20,548,000	ctn	\$13.80	\$283,562,000
BULK	2021	—	—	305,000	ton	\$303.00	\$92,415,000
	2020	—	—	283,000	ton	\$281.00	\$79,523,000
<b>HEAD LETTUCE, TOTAL</b>	2021	<b>37,808</b>	—	—	—	—	<b>\$451,556,000</b>
	2020	<b>39,007</b>	—	—	—	—	<b>\$428,580,000</b>
<b>LEAF LETTUCE</b>							
BUTTER LEAF	2021	1,005	950	955,000	ctn	\$9.92	\$9,474,000
	2020	939	950	892,000	ctn	\$10.40	\$9,277,000
ENDIVE	2021	288	809	233,000	ctn	\$11.42	\$2,661,000
	2020	329	900	266,000	ctn	\$11.30	\$3,006,000
ESCAROLE	2021	155	813	126,000	ctn	\$12.95	\$1,632,000
	2020	236	900	143,000	ctn	\$12.30	\$1,759,000
GREEN LEAF	2021	5,147	950	4,890,000	ctn	\$11.99	\$58,631,000
	2020	4,779	950	4,540,000	ctn	\$13.30	\$60,382,000
RED LEAF	2021	2,585	950	2,456,000	ctn	\$10.92	\$26,820,000
	2020	2,694	950	2,559,000	ctn	\$12.50	\$31,988,000
LEAF LETTUCE, BULK	2021	—	—	34,600	ton	\$585.00	\$20,241,000
	2020	—	—	34,800	ton	\$581.00	\$20,219,000
ROMAINE, FRESH <sup>9</sup>	2021	34,801	1,000	34,801,000	ctn	\$14.00	\$487,214,000
	2020	33,410	1,000	33,410,000	ctn	\$13.90	\$464,399,000
ROMAINE, BULK	2021	13,502	—	257,000	ton	\$525.00	\$134,925,000
	2020	12,584	—	239,000	ton	\$509.00	\$121,651,000
<b>LEAF LETTUCE, TOTAL</b>	2021	<b>57,483</b>	—	—	—	—	<b>\$741,598,000</b>
	2020	<b>54,912</b>	—	—	—	—	<b>\$712,681,000</b>
<b>LETTUCE CROPS TOTAL</b>	<b>2021</b>	<b>95,291</b>					<b>\$1,193,154,000</b>
	<b>2020</b>	<b>93,919</b>					<b>\$1,141,261,000</b>

<sup>8</sup> Carton.  
<sup>9</sup> Includes: Romaine Hearts.

Contributed by: **Taylor Farms**

## CALIFORNIA SALAD

### Ingredients

- 4 oz **spring mix**
- ¼ cup tarragon leaves, whole
- ¼ cup **lemon** vinaigrette
- ¼ cup sliced almonds
- ½ cup mild semisoft goat cheese or feta cheese, crumbled
- ½ ripe **avocado**
- 8 dried apricots

### Instructions

- 1 Just before you plan to serve the salad, place the greens and the tarragon in a large salad bowl and toss to combine.
- 2 Add 3 tablespoons of the vinaigrette. Toss to lightly coat the leaves, then taste to see if more dressing is needed.
- 3 Transfer the greens to a platter or individual salad plates. Top with almonds and cheese.
- 4 Cut the avocado in half and discard the pit. Cut the avocado flesh lengthwise into thin slices and gently scoop the slices out of the skin with a large spoon. Arrange the slices around the edge of the platter or plates. Sprinkle the apricots over the salad. Serve immediately.

*Pairs well with a Chardonnay.*



Contributed By: **Calavo Growers**

## EVERYTHING YOU AVO WANTED SALAD

### Ingredients

- 2 ½ cups **romaine** or lettuce of choice, chopped
- 2 **sweet mini peppers**, sliced
- 4 **grape tomatoes**
- ¼ **cucumber**, sliced into half moons
- 2 Tbsp crouton crumbles
- 1 tsp Everything Bagel seasoning
- 2 oz red wine vinaigrette dressing
- ½ **avocado**, thinly sliced

### Instructions

- 1 Place lettuce, sliced peppers, tomato and cucumber in a bowl.
- 2 Drizzle dressing on top and toss to combine.
- 3 Place dressed salad in serving bowl and arrange sliced avocado on top.
- 4 Garnish with crouton crumbles and sprinkle of “Everything Bagel” seasoning and serve.

*Pairs well with an Albarino.*







## FRUIT & NUT CROPS

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
AVOCADO	2021	210	5.47	1,150	ton	\$2,670.00	\$3,071,000
	2020	223	5.58	1,240	ton	\$2,380.00	\$2,951,000
BLACKBERRY	2021	238	8.60	2,050	ton	\$6,490.00	\$13,305,000
	2020	225	9.00	2,030	ton	\$7,730.00	\$15,692,000
GRAPES (WINE) <sup>10</sup>	2021	41,972	3.98	167,000	ton	—	\$218,591,000
	2020	44,886	2.10	94,300	ton	—	\$105,991,000
LEMON	2021	1,324	29.20	38,700	ton	\$920.00	\$35,604,000
	2020	1,360	25.00	34,000	ton	\$1,080.00	\$36,720,000
MISC. FRUIT <sup>11</sup>	2021	427	3.29	1,400	ton	\$2,530.00	\$3,542,000
	2020	404	3.62	1,460	ton	\$2,780.00	\$4,059,000
RASPBERRY	2021	590	9.40	5,550	ton	\$7,850.00	\$43,568,000
	2020	579	8.70	5,040	ton	\$7,270.00	\$36,641,000
STRAWBERRY, FRESH	2021	10,404	34.99	364,000	ton	\$2,620.00	\$953,680,000
	2020	10,044	34.90	351,000	ton	\$2,600.00	\$912,600,000
STRAWBERRY, PROCESSED	2021	—	—	21,000	ton	\$686.00	\$14,406,000
	2020	—	—	18,500	ton	\$545.00	\$10,083,000
STRAWBERRY, TOTAL	2021	10,404	—	385,000	ton	—	\$968,086,000
	2020	10,044	—	370,000	ton	—	\$922,683,000
FRUIT & NUT CROPS TOTAL	2021	55,165					\$1,285,767,000
	2020	57,131*					\$1,124,737,000

<sup>10</sup> Represents bearing acres only; see Wine Grape Production, pages 20-21.

<sup>11</sup> Includes: Apple, Blueberry, Olive and Walnut.

\*2020 Total Acreage corrected.

Contributed by: **California Strawberry Commission**

## STRAWBERRY CUCUMBER SALAD

### Ingredients

#### VINAIGRETTE

- 3 Tbsp rice vinegar
- 1½ tsp **fresh dill**, chopped
- 1½ tsp **fresh mint**, chopped
- ½ tsp ground cumin
- ½ tsp sweet paprika
- ½ tsp salt
- ½ tsp sugar
- ¼ cup extra virgin **olive oil**

#### SALAD

- 4½ cups (1½ lbs) **strawberries**, stemmed and quartered
- 1 medium **cucumber**, peeled, seeded and cut into ½ inch dice
- ¾ cup Italian **parsley** leaves
- 4 **green onions**, chopped
- 6 **radishes**, thinly sliced

### Instructions

#### FOR THE VINAIGRETTE:

- 1 In bowl, whisk together all vinaigrette ingredients except oil.
- 2 Slowly whisk in oil until blended.

#### FOR THE STRAWBERRY CUCUMBER SALAD:

- 1 In large bowl, toss salad ingredients with vinaigrette until coated.
- 2 Mound salad on 6 chilled plates, dividing it equally. Serve immediately.

*Pairs well with a Brut Cuvee.*





## NURSERY, CUT FLOWERS & FOLIAGE

CROP	YEAR	ACREAGE	PRODUCTION QUANTITY	UNIT	VALUE PER UNIT	TOTAL
VEGETABLE TRANSPLANTS	2021	230.0	2,386,102,000	per plant	\$0.02	\$47,722,000
	2020	372	1,815,610,000	per plant	\$0.04	\$72,624,000
MISC. NURSERY PRODUCTS <sup>12</sup>	2021	245	4,148,000	various	\$11.68	\$48,449,000
	2020	349	7,729,000	various	\$5.65	\$43,669,000
MISC. CUT FLOWERS & FOLIAGE <sup>13</sup>	2021	112	1,993,000	various	\$1.81	\$3,607,000
	2020	179	3,366,000	various	\$1.05	\$3,543,000
	<b>2021</b>	<b>587</b>				<b>\$99,778,000</b>
	<b>2020</b>	<b>565</b>				<b>\$119,836,000</b>

<sup>12</sup> Includes: Begonia, Bulbs, Christmas Trees, Herbs, Fruit & Nut Trees, Jasmine, Money Tree, Natives, Orchids, Poinsettia, Potted Plants and Turf.

<sup>13</sup> Includes: Alstroemeria, Calla Lily, Carnations, Chrysanthemum, Curly Willow, Dahlia, Eucalyptus, Freesia, Gerbera, Gladiolas, Hydrangea, Iris, Lavender, Lily (Asiatic & Oriental), Marigold, Narcissus, Protea, Ranunculus, Roses, Snapdragon, Statice, Stock, Sunflower, Tulips and Zinnia.

“

Not only can diversification help reduce the initial impact of risks, but it can also hasten recovery. For example, **the county's total agricultural production value bounced back with a 4.85% increase for 2021** despite a lingering pandemic.



## APIARY & SEED PRODUCTION

### APIARY PRODUCTION

CROP	YEAR	COLONIES	PRODUCTION	UNIT	VALUE PER UNIT	TOTAL
HONEY	2021	—	11,300	lbs	\$2.71	\$30,600
	2020	—	10,925	lbs	\$2.31	\$25,200
POLLINATION <sup>14</sup>	2021	2,337	—	colony	\$63.90	\$149,000
	2020	2,451	—	colony	\$66.00	\$162,000
WAX	2021	—	339	lbs	—	\$1,590
	2020	—	342	lbs	—	\$1,570
<b>APIARY PRODUCTION TOTAL</b>	<b>2021</b>					<b>\$181,000</b>
	<b>2020</b>					<b>\$189,000</b>

### SEED PRODUCTION

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
BEAN SEED	2021	607	1.20	728	ton	\$3,370.00	\$2,453,000
	2020	620	1.21	750	ton	\$3,220.00	\$2,415,000
MISC. SEED <sup>15</sup>	2021	294	0.66	194	ton	\$11,100.00	\$2,153,000
	2020	705	0.67	472	ton	\$4,190.00	\$1,978,000
<b>SEED PRODUCTION TOTAL</b>	<b>2021</b>	<b>901</b>					<b>\$4,606,000</b>
	<b>2020</b>	<b>1,325</b>					<b>\$4,393,000</b>

<sup>14</sup> Seed Crops Pollination Services.

<sup>15</sup> Includes: Barley, Broccoli, Cauliflower, Corn, Cucumber, Pea and Sunflower Seeds.

Contributed by: **Dole Fresh Vegetables**

## GRILLED ROMAINE WITH GREEK YOGURT DRESSING

### Ingredients

#### SALAD

- 2 romaine hearts, halved
- ½ cup grape tomatoes, quartered
- ¼ cup feta cheese, crumbled
- ¼ cup pitted Kalamata olives, chopped
- Olive oil, to coat halved romaine hearts
- Salt and pepper, to taste

#### DRESSING

- ½ cup plain 0% Greek yogurt
- 3 Tbsp olive oil
- 1 Tbsp lemon juice
- 1 tsp parsley, chopped
- 1 tsp chives, chopped
- 1 tsp honey
- ½ tsp Dijon mustard
- Salt and pepper, to taste

### Instructions

- 1 Heat grill or large grill pan to medium-high heat.
- 2 Whisk together all dressing ingredients and season to taste with salt and pepper, then set aside.
- 3 Cut romaine hearts in half lengthwise, leaving root intact and removing any blemished outer leaves. Rinse and pat dry.
- 4 Sprinkle all sides of romaine hearts with olive oil, salt and pepper, to taste.
- 5 Grill 4 to 5 minutes total, turning until grill-marked on all sides. If using a large grill pan, grill only 2 romaine halves at a time.
- 6 Arrange cooked romaine cut-side up on large salad plates. Drizzle each with Greek yogurt dressing, to taste, and sprinkle with tomatoes, feta cheese and olives. Refrigerate any leftovers.

*Pairs well with a Sauvignon Blanc.*



## LIVESTOCK & POULTRY

CROP	YEAR	HEAD	PRODUCTION	UNIT	VALUE PER UNIT	TOTAL
CATTLE & CALVES	2021	25,500	179,000	cwt	\$139.00	\$24,881,000
	2020	25,300	177,000	cwt	\$136.00	\$24,072,000
STOCKER	2021	60,800	429,000	cwt	\$140.00	\$60,060,000
	2020	60,700	429,000	cwt	\$136.00	\$58,344,000
SHEEP & LAMBS	2021	1,200	1,440	cwt	\$158.00	\$228,000
	2020	1,150	1,427	cwt	\$157.00	\$224,000
HOGS	2021	1,530	412,000	lbs	\$0.62	\$255,000
	2020	1,550	419,000	lbs	\$0.60	\$251,000
MISC. LIVESTOCK <sup>16</sup> & POULTRY <sup>17</sup> PRODUCTS	2021	—	—	—	—	\$28,010,000
	2020	—	—	—	—	\$28,000,000
<b>LIVESTOCK &amp; POULTRY TOTAL</b>	<b>2021</b>					<b>\$113,434,000</b>
	<b>2020</b>					<b>\$110,891,000</b>

<sup>16</sup> Includes: Bulls, Cull Cows, Dairy Cows, Milk Manufacturing and Market Milk.

<sup>17</sup> Includes: Eggs, Hatcheries and Poultry.

\*Hundredweight (100 pounds).

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Compared to other California counties, Monterey County agriculture’s Shannon-Weaver Index—an indicator of economic resilience—is **high and holding steady** over time.



## WINE GRAPE PRODUCTION

WHITE GRAPE VARIETIES	HARVESTED ACRES	TOTAL TONS	AVERAGE PRICE PER TON	TOTAL VALUE
CHARDONNAY	16,557	57,600	\$1,230.00	\$70,848,000
SAUVIGNON BLANC	1,014	6,360	\$1,240.00	\$7,886,000
PINOT GRIS	1,030	7,210	\$1,010.00	\$7,282,000
GEWURZTRAMINER	374	5,840	\$686.00	\$4,006,000
RIESLING	737	3,140	\$808.00	\$2,537,000
PINOT BLANC	68	647	\$1,250.00	\$809,000
MALVASIA BIANCA	96	725	\$1,070.00	\$776,000
MUSCAT BLANC	78	556	\$1,170.00	\$651,000
GRUNER VELTLINER	101	459	\$1,239.00	\$569,000
VOGINIER	111	115	\$1,580.00	\$182,000
OTHER WHITES <sup>18</sup>	203	832	\$1,380.00	\$1,148,000
<b>SUBTOTAL WHITE GRAPE</b>	<b>20,369</b>	<b>83,500</b>		<b>\$96,694,000</b>

RED GRAPE VARIETIES	HARVESTED ACRES	TOTAL TONS	AVERAGE PRICE PER TON	TOTAL VALUE
PINOT NOIR	10,514	42,400	\$1,670.00	\$70,808,000
CABERNET SAUVIGNON	4,720	19,100	\$1,270.00	\$24,257,000
MERLOT	3,442	8,620	\$1,019.00	\$8,784,000
SYRAH/SHIRAZ	1,123	5,480	\$1,380.00	\$7,562,000
GRENACHE	361	3,260	\$1,320.00	\$4,303,000
MALBEC	328	1,920	\$1,440.00	\$2,765,000
PETITE SIRAH	296	1,160	\$1,400.00	\$1,624,000
ZINFANDEL	132	326	\$1,680.00	\$548,000
PETIT VERDOT	183	119	\$1,350.00	\$161,000
CABERNET FRANC	110	110	\$1,280.00	\$141,000
OTHER REDS <sup>19</sup>	394	732	\$1,290.00	\$944,000
<b>SUBTOTAL RED GRAPE</b>	<b>21,603</b>	<b>83,200</b>		<b>\$121,897,000</b>

<sup>18</sup> Other Whites Include: Albarino, Arneis, Chenin Blanc, Grenache Blanc, Marsanne, Musca Orange, Picpoul Blanc, Roussanne, Sauvignon Musque, Semillon and Vermentino.

<sup>19</sup> Other Reds Include: Barbera, Carignane, Cinsaut, Dolcetto, Dornfelder, Gamay (Napa) Valdiguie, Mouvedre, Primitivo, Sangiovese, Tannat, and Tempranillo.



## WINE GRAPE TRENDS

YEAR	NONBEARING ACRES	BEARING ACRES	TOTAL TONS	VALUE
2021	781	41,972	167,000	\$218,591,000
2020	1,028	44,886	94,300	\$105,991,000
2019	1,147	44,683	132,000	\$186,096,000
2018	1,137	44,924	180,000	\$247,758,000
2017	896	44,299	171,000	\$239,027,000
2016	1,496	44,771	172,000	\$238,892,000
2015	2,549	44,296	140,300	\$185,925,000
2014	2,512	45,993	200,000	\$247,357,000
2013	1,531	42,986	185,000	\$226,982,000
2012	1,936	45,130	172,000	\$214,306,000
2011	2,006	43,034	124,000	\$140,976,000

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Wildfires and a pandemic caused a 43% decline in wine grapes for 2020, but, because of **Monterey County's agricultural diversification**, the agriculture industry's overall decline was limited to just 11.3%.



## ORGANIC PRODUCTION

COMMODITY GROUPS	2021 COMMODITY ACRES	2020* COMMODITY ACRES
CITRUS & TREE FRUIT	132	142
GRAPES, TABLE & WINE	1,077	1,057
STRAWBERRY	1,638	2,131
OTHER BERRIES & FRUIT	906	654
BROCCOLI	7,270	5,518
CARROT	483	265
CELERY	2,478	1,911
LETTUCE	17,481	15,988
SPINACH	10,156	8,559
MISC. VEGETABLES	10,375	7,916
FALLOW	391	280
ALL OTHER FIELD CROPS	173	887
LIVESTOCK ACREAGE	26,581	26,660
<b>TOTAL ACRES</b>	<b>79,141</b>	<b>71,660</b>
<b>TOTAL PRODUCERS</b>	<b>323</b>	<b>302</b>
<b>REPORTED GROSS SALES</b>	<b>\$775,995,000</b>	<b>\$723,377,000</b>

\*Updated Acres, Producers and Gross Sales.  
Organic Production & Gross Sales Table - Data provided by California Department of Food and Agriculture State Organic Program from individually reported annual registrations. Producers and Gross Sales are not itemized to assure confidentiality of individual business information.

## EXPORTS BY COMMODITY

COMMODITY	2021	TOTAL POUNDS
LETTUCE		168,740,000
STRAWBERRY		89,065,000
BROCCOLI		63,607,000
CELERY		45,616,000
CAULIFLOWER		44,051,000
SPINACH		18,682,000
CABBAGE		14,485,000
CARROT		6,938,000
BRUSSELS SPROUT		5,980,000
BEANS		4,301,000
RASPBERRY		3,789,000
RADICCHIO		3,434,000
OTHER		12,258,000
<b>TOTAL</b>		<b>480,946,000</b>

COMMODITY	2020	TOTAL POUNDS
LETTUCE		154,725,000
STRAWBERRY		74,316,000
BROCCOLI		37,281,000
CELERY		29,093,000
CAULIFLOWER		24,286,000
SPINACH		18,910,000
CABBAGE		7,254,000
RASPBERRY		3,381,000
RADICCHIO		3,312,000
CARROT		2,329,000
LEEK		2,126,000
SEEDS		2,099,000
OTHER		10,310,000
<b>TOTAL</b>		<b>371,262,000</b>

## EXPORTS BY TRADE PARTNERS

COUNTRY	2021	TOTAL POUNDS
CANADA		198,313,000
MEXICO		167,561,000
TAIWAN		64,895,000
JAPAN		13,465,000
HONG KONG		7,544,000
SAUDI ARABIA		7,218,000
KUWAIT		4,696,000
UNITED ARAB EMIRATES		4,214,000
KOREA, REPUBLIC OF		3,556,000
UNITED KINGDOM		2,746,000
EUROPEAN UNION		2,041,000
QATAR		1,597,000
PUERTO RICO		1,383,000

COUNTRY	2020	TOTAL POUNDS
MEXICO		131,293,000
CANADA		109,543,000
TAIWAN		77,707,000
JAPAN		20,857,000
HONG KONG		7,662,000
KOREA, REPUBLIC OF		6,160,000
SAUDI ARABIA		5,274,000
EUROPEAN UNION		3,434,000
UNITED ARAB EMIRATES		3,122,000
KUWAIT		2,228,000
PUERTO RICO		1,565,000
PANAMA		754,000
QATAR		447,000

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Monterey County's steady, high index stands in contrast to the downward trend many California counties face—places that have become dependent on a few major products such as almonds, berries or wine grapes.



## FIELD CROPS

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
BARLEY, GRAIN	2021	3,268	0.93	3,040	ton	\$218.00	\$663,000
	2020	3,988	0.96	3,830	ton	\$143.00	\$548,000
BEAN <sup>20</sup>	2021	1,324	1.56	2,070	ton	\$1,870.00	\$3,871,000
	2020	1,180	1.50	1,770	ton	\$2,080.00	\$3,682,000
HAY, ALFALFA	2021	730	2.49	1,820	ton	\$214.00	\$389,000
	2020	913	3.22	2,940	ton	\$109.00	\$320,000
INDUSTRIAL HEMP*	2021	51.8	2,010	104,000	lb	\$3.60	\$374,000
	2020	33.0	200	6,600	lb	\$93.80	\$619,000
MISC. FIELD CROPS <sup>21</sup>	2021	3,119	—	—		—	\$776,000
	2020	2,971	—	—		—	\$758,000
OAT <sup>22</sup>	2021	467	1.74	813	ton	\$120.00	\$97,600
	2020	258	1.93	498	ton	\$122.00	\$60,800
RANGELAND	2021	1,153,814	—	—	acre	\$19.00	\$21,922,000
	2020	1,058,545	—	—	acre	\$19.00	\$20,112,000
<b>FIELD CROPS TOTAL</b>	<b>2021</b>	<b>1,162,774</b>					<b>\$28,093,000</b>
	<b>2020</b>	<b>1,068,313</b>					<b>\$26,100,000</b>

<sup>20</sup> Includes: Peruano, Pintos, Pink, Pinquito and Lima Beans.

<sup>21</sup> Includes: Pastureland and Wheat (grain).

<sup>22</sup> Includes: Hay Oats and Misc. Oats.

\*Harvested Acres - Industrial Hemp.



## INDUSTRIAL HEMP PRODUCTION

Monterey County growers are all outdoors and utilize the natural flowering cycle of Industrial Hemp plants, thus they only get one crop rotation per year during September through October.

Monterey County's Industrial Hemp cultivation pilot program has had 15 different operations registered with the Monterey County Agricultural Commissioner's office and the California Department of Food and Agriculture (CDFA) Industrial Hemp Program. A total of 852 acres permitted for cultivation and 98.8 acres of Industrial Hemp were grown

in southern parts of Monterey County. All harvested acres were tested for THC concentration and passed as Industrial Hemp.

In 2021, 9 operations registered 155 acres for the program and harvested 51.8 acres for a total of 104,000 pounds of Industrial Hemp. All harvested acres were flower production for cannabinoids other than THC. Due to market volatility and demand for industrial hemp, values decreased for harvested flower significantly in 2021.

REGISTERED OPERATION TYPES	REGISTRATIONS*	ACRES REGISTERED	HARVESTED ACRES	PRODUCTION (LB)	VALUE
CULTIVATORS	—	—	—	—	—
BREEDERS	—	—	—	—	—
EARI <sup>23</sup>	—	—	—	—	—
<b>TOTAL 2021</b>	<b>9</b>	<b>155</b>	<b>51.8</b>	<b>104,000</b>	<b>\$374,000</b>
<b>TOTAL 2020</b>	<b>11</b>	<b>458</b>	<b>33.0</b>	<b>6,600</b>	<b>\$619,000</b>

<sup>23</sup> Established Agricultural Research Institutions.

\*Registrations, Acres Registered, Harvested Acres, Production, and Value are not itemized by operation type for business confidentiality.



# CANNABIS PRODUCTION

## PRODUCTION AND VALUE

PRODUCT	PRODUCTION	UNIT	\$ PER UNIT	VALUE
NURSERY PRODUCTS	3,319,000	Each	\$8.70	\$28,875,000
FLOWER (MIXED LIGHT)	640,000	Pound	\$783.00	\$501,120,000
FLOWER (INDOOR)	53,500	Pound	\$1,530.00	\$81,855,000
TRIM	30,600	Pound	\$59.80	\$1,830,000
SEED	6,447,000	Each	\$0.70	\$4,513,000
<b>TOTAL 2021</b>				<b>\$618,193,000</b>
<b>TOTAL 2020</b>				<b>\$484,102,000</b>

**Review of Production and Value Table** - Total production and value for cannabis cultivation during 2021 was calculated at \$618.1 million. An increase of \$134 million from 2020 value resulted from greater production of flower and nursery products as well as good pricing for Monterey County cannabis products during the first half of the year. The value is summarized and averaged as a gross production value. Capital expenditures, labor, profits, fees, taxes, and other overhead costs are not reflected in this total and it does not represent the net profit of the industry, or any individual cultivator.

## PRODUCTION BY TYPE

PRODUCTION TYPE	PRODUCTION AREA (SQ. FEET)	NURSERY PRODUCTS (EA)	DRIED FLOWER (LB)	TRIM (LB)	SEED* (EA)
NURSERY	1,511,000	3,192,000	—	—	6,447,000
INDOOR	85,400	—	53,500	7,530	—
MIXED LIGHT	3,166,000	—	640,000	23,100	—
<b>TOTAL 2021</b>	<b>4,762,000</b>	<b>3,192,000</b>	<b>694,000</b>	<b>30,600</b>	<b>6,447,000</b>
<b>TOTAL 2020</b>	<b>4,032,000</b>	<b>2,063,000</b>	<b>496,000</b>	<b>99,300</b>	<b>5,640,000</b>

**Review of Production by Type Table** - Monterey County cannabis production can be generalized into three groups: Nursery, Indoor and Mixed Light. Nursery products include clones/transplants, small potted plants (teens) and plants grown to produce clones (mothers). Indoor cultivation uses only artificial light and Mixed Light uses artificial and natural light; both production methods produce flowering plants. Trim (small pieces of flower and leaves containing cannabinoids) production reported decreased due to less external transfers and sales. \*Seed Production 2020 updated from pound to each quantity.

## STATE ISSUED CULTIVATION LICENSES

LICENSE TYPES AND SQUARE FOOTAGE	NO. OF LICENSES PER TYPE	CULTIVATION TOTAL AREA (SQUARE FEET)	CULTIVATION TOTAL AREA (ACRES)
NURSERY	57	—	—
SPECIALTY COTTAGE MIXED LIGHT (2,500 FT <sup>2</sup> )	3	7,500	0.17
SPECIALTY COTTAGE INDOOR (500 FT <sup>2</sup> )	2	1,000	0.02
SPECIALTY INDOOR (5,000 FT <sup>2</sup> )	14	70,000	1.61
SPECIALTY MIXED LIGHT (5,000 FT <sup>2</sup> )	25	125,000	2.87
SMALL INDOOR (10,000 FT <sup>2</sup> )	16	160,000	3.67
SMALL MIXED LIGHT (10,000 FT <sup>2</sup> )	444	4,440,000	101.93
MEDIUM INDOOR (22,000 FT <sup>2</sup> )	2	44,000	1.01
MEDIUM MIXED LIGHT (22,000 FT <sup>2</sup> )	13	286,000	6.57
<b>TOTAL 2021</b>	<b>576</b>	<b>5,134,000</b>	<b>117.85</b>
<b>TOTAL 2020</b>	<b>500*</b>	<b>4,433,000</b>	<b>101.80</b>

**Review of DCC Issued Cultivation Licenses Table** - In 2021, California Department of Cannabis Control (DCC) issued 5.13 million square feet, or 117.9 acres, of cultivation license area in Monterey County. License types represent gross production area permitted for cultivation and must not exceed each licensed square footage of flowering canopy. Nursery licenses are needed to cultivate vegetative plants, that are not flowering (mature), from seed or clones. \*2020 No. of Licenses corrected, removed number of processor licenses

## UTILIZATION OF STATE LICENSES

LICENSE TYPE	NO. OF LICENSES UTILIZED PER TYPE	CULTIVATION TOTAL AREA (SQUARE FEET)	CULTIVATION TOTAL AREA (ACRES)
NURSERY	—	1,511,000	34.69
INDOOR	—	85,400	1.96
MIXED LIGHT	—	3,166,000	72.68
<b>TOTAL 2021</b>	<b>—</b>	<b>4,762,000</b>	<b>109.30</b>
<b>TOTAL 2020</b>	<b>396</b>	<b>4,032,000</b>	<b>92.60</b>

**Review of Utilization of DCC Issued Cultivation Licenses Table** - This table reflects reported utilization of DCC issued cultivation licenses. Not all licenses, nor all square footage, issued by DCC were utilized in production. No. of Licenses Utilized data for 2021 not available at time of publication.

**“** In 2021 cannabis market prices declined sharply statewide due to imbalance between supply, demand, and legal retail outlets. Prices for Monterey County mixed-light cannabis flower declined 68% from their spring highs and indoor prices fell 56% by the end of the year.

— Robert Roach, Executive Director, Monterey County Cannabis Industry Association (MCCIA)



## SUMMARY OF PEST MANAGEMENT

Monterey County's Invasive Weed program preserves agriculture, valuable habitat and community infrastructure by controlling noxious and invasive weeds. Pest Management and Eradication is the concerted effort to abate incipient and established infestations of biologically or economically important pests.

Weed abatement activities increased in 2021 to reduce the spread of Impatiens Necrotic Spot Virus (INSV), an emerging economic pest of lettuce in the Salinas Valley. This pathogen is spread by a small ubiquitous insect called Western Flower Thrips. During the winter months, when lettuce production fields are not present, weeds serve as the over-wintering host of INSV. Our department has joined the Grower Shipper Association, USDA, and UC Cooperative Extension, among others, to form the INSV Taskforce in an effort to monitor the pathogen, educate growers and develop management strategies. Our department assists with weed abatement issues on infested properties that could act as a reservoir for the pathogen.

Roads are prime corridors for invasive plants that can be carried by passing vehicles and their loads. Roadside Treatment programs performed along county roads work to limit spread of weeds and eliminate new weeds before they are problematic. 732 gross acres of Yellow Starthistle infested rights of way were managed in South Monterey County.

The Monterey County Ag Commissioner's Office maintains a concerted weed mapping and surveying effort, utilizing CalFlora Observer Pro Weed

Mapper System and sharing data with CalWeedMapper for regional collaboration and prioritization purposes. 43.5 gross acres of A-rated Skeletonweed (*Chondrilla juncea*) detected in 2020 is under management. 570 gross acres were surveyed for A-rated Scotch Thistle and 2 gross acres of plants were treated. 8 gross acres of A-rated Puna Grass were manually controlled and 2,732 gross acres were surveyed and mapped.

Funding to develop a Weed-Free Aggregate Program was secured from the California Department of Food and Agriculture's Noxious Weed Grant Program to stop invasive plant spread at an important source point. Quarries provide valuable substrate for roads, paths, trails, leveling land and more. A Weed-Free Aggregate Program will protect project sites in crop land, public lands and infrastructure from becoming fresh habitat for invasive weeds by ensuring soil, gravel and rock materials arrive clean.

Residents and visitors to Monterey County can help reduce the spread of invasive weeds by cleaning their boots and tires after hiking and biking, watching for unusual plants and informing the Agricultural Commissioner's Office if they suspect an invasive plant in the county.

Gardeners and landscapers can vet their plant choices with PlantRight.org to find excellent horticultural alternatives to common invasive landscape plants.

Visit the California Invasive Plant Council website, cal-ipc.org, for extensive information on California's invasive plants, their regional prioritization and best management practices.

### WEEDS OF CONCERN IN MONTEREY COUNTY

Fertile Capeweed, <i>Arctotheca calendula</i>	Veldt Grass, <i>Ehrharta calycina</i>
French Broom, <i>Genista monspessulana</i>	Taurian Thistle, <i>Onopordum tauricum</i>
Cape Ivy, <i>Delairia odorata</i>	Puna Grass, <i>Achnatherum brachychaetum</i>
Arundo, <i>Arundo donax</i>	Skeletonweed, <i>Chondrilla juncea</i>
Pampas Grass, <i>Cortaderia selloana</i>	Scotch Thistle, <i>Onopordum acanthium</i>
Purple Pampas Grass, <i>Cortaderia jubata</i>	Sticky Eupatorium, <i>Ageratina adenophora</i>
Yellowstar-thistle, <i>Centaurea solstitialis</i>	

### WEED ACTIVITIES SUMMARY

GROSS ACRES SURVEYED	3,451
GROSS ACRES TREATED	841
NET ACRES TREATED	312
PROPERTIES SURVEYED	61
PROPERTIES TREATED	11

## SUMMARY OF PEST DETECTION AND EXCLUSION ACTIVITIES

**Pest Detection** is the systematic search for invasive pests throughout the county by means of trapping, luring and surveying. The goal is to detect novel pests before they become established so that eradication is biologically and economically feasible. Detection trapping is performed primarily by the County Agricultural Commissioner's offices.

### 2021 PEST DETECTION SUMMARY

TARGET PEST	INSECT HOSTS	TRAPS PLACED	SERVICINGS
MEDFLY	Fruit Trees	243	4,313
MELON FRUIT FLY	Vegetable Gardens	92	1,004
MEXICAN FRUIT FLY	Fruit Trees	125	3,668
ORIENTAL FRUIT FLY	Fruit Trees	243	4,313
MISC. FRUIT FLY	Fruits and Vegetables	105	1,108
GYPSY MOTH	Shade Trees	208	1,308
JAPANESE BEETLE	Turf, Rose	172	1,280
KHAPRA BEETLE	High Hazard Commodities	0	0
LIGHT BROWN APPLE MOTH	Ornamental/Commercial Crops	382	2,317
EUROPEAN GRAPEVINE MOTH	Grapes	1,012	7,433
ASIAN CITRUS PSYLLID - URBAN/COMMERCIAL	Citrus	416	7,274
GLASSY-WINGED SHARPSHOOTER	Nurseries/Urban Areas	627	11,585
EUROPEAN GRAPE BERRY MOTH	Grapes	668	8,444
EUROPEAN STONE FRUIT YELLOWS	Stone Fruit Trees (Visual Survey)	178	n/a
<b>TOTAL TRAPPING PROGRAM ACTIVITIES</b>		<b>4,474</b>	<b>54,047</b>

**Pest Exclusion** is the process of monitoring the channels of trade through routine inspections and commodity certification to prevent the transport and introduction of economically important pests and pathogens. Inspections include phytosanitary field inspections, special surveys, incoming plant shipments, parcel terminals, and nursery stock inspections.

### 2021 PEST EXCLUSION SUMMARY

TARGET PEST	LOCATION	INSPECTIONS
GLASSY-WINGED SHARPSHOOTER	Plant Nurseries / Homeowners	1,043
GYPSY MOTH	Homeowners	16
NURSERY INSPECTION	Plant Nursery	66
SHIPMENTS FROM SOUTHERN STATE	Plant Nurseries	26
SHIPMENTS FROM NON-SOUTHERN STATE	Plant Nurseries	130
SEED INSPECTIONS	Seed Companies	112
SEED RETAILER/LABELER	Seed Companies	153
SEED PLANT QUARANTINE FIELD WALKS	Growers	692
SUDDEN OAK DEATH	Plant Nurseries / Homeowners	45
INCOMING PARCELS - TERMINAL INSPECTIONS	Terminals - Fed Ex	376
INCOMING PARCELS - TERMINAL INSPECTIONS	Terminals - UPS	25





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