



COUNTY OF SAN DIEGO

# 2020

CROP STATISTICS & ANNUAL REPORT

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# MESSAGE FROM THE AGRICULTURAL COMMISSIONER





# County of San Diego

HA DANG  
AGRICULTURAL COMMISSIONER/  
SEALER OF WEIGHTS & MEASURES

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MÉGAN MOORE  
ASST. AGRICULTURAL COMMISSIONER/  
SEALER OF WEIGHTS & MEASURES

Karen Ross, Secretary,  
California Department of Food and Agriculture  
and  
The Honorable Board of Supervisors of the County of San Diego  
Supervisor Nathan Fletcher, Chair  
Supervisor Nora Vargas, Vice Chair  
Supervisor Joel Anderson  
Supervisor Terra Lawson-Remer  
Supervisor Jim Desmond

I respectfully submit the County of San Diego Department of Agriculture, Weights and Measures' 2020 Crop Statistics and Annual Report of acreage, yield and value of agricultural production for San Diego county. In 2020, the direct economic output from agricultural production totaled \$1,810,326,411. This equates to an increase of about \$15 million or 0.8% from 2019's total value of \$1,795,528,573. The overall acreage devoted to commercial agriculture went from 234,477 acres in 2019 to 224,549 acres in 2020 for a decrease of about 10 thousand acres or 4.2% overall.

This report details crop information and highlights the many diverse programs to support the County's Strategic Initiatives of Building Better Health, Living Safely, Sustainable Environments/Thriving, and Operational Excellence.

Special thanks to the producers, industry groups, and public agencies who provided vital information for this report. I'd also like to express gratitude for your leadership and support. Finally, much appreciation to my outstanding staff for their continued superior service to our community.

Regards,

Ha Dang  
Agricultural Commissioner/  
Sealer of Weights and Measures



# OVERVIEW OF CHANGES FROM LAST YEAR



# 2020 Overview of Changes



**The overall value of commercial agriculture in San Diego county increased 0.8% from 2019 to 2020.** This change is mainly due to an 8% increase in the value of the Bedding Plants, Color, Perennials, Cacti & Succulents crops together with a 9% increase in avocados. The Nursery & Cut Flower Products, and Fruit & Nut Crops and Forest Products groups increased in value while all others decreased. The COVID-19 impacts were mixed. Some growers reported labor shortages and businesses closures, while others had an increase in sales due to the pandemic demand for certain crops.

The Ornamental Trees & Shrubs category continues to be the top crop, bringing a total of \$432,039,762 or 24% of the total value of agriculture production in San Diego county. Following close behind Bedding Plants, Color, Perennials, the Cacti & Succulents crops was valued at \$431,766,617 equaling 24% of the region's overall agriculture production.

The Nursery & Cut Flower Products group rose by 2% to a value of \$1,274,784,274. Even though there were increases in Nursery Products values, there was a decrease in Cut Flower Products overall value by 10%. The Wax Flowers Outdoor and Other Cut Flowers crops decrease by 12%. The reduction in value in some Nursery & Cut Flower Products is due to a decrease in acreage, while the increase of the overall value may be attributed to the increased demand for Nursery & Cut Flowers, as people were ordered to stay home during the pandemic, possibly causing an increase in the demand for home gardening products.

The value of the Fruit & Nut Crops increased to \$344,250,521, a 1% rise from the previous year. The overall citrus value decreased by 3% from last year, due in part to a 9% decrease in acreage. However, grapefruit had an increase value of 14% while lemons had an increase value of 3%. Avocados were again the biggest winner of this group as its value rose to \$152,957,658, a 9% or \$12 million increase from the previous year. The increase in value for avocados is due in part to a 46% increase in yield.

The value of the Vegetable & Vine Crops group decreased to \$122,665,855, a 6% decrease from last year due to a combination of decreases in acreage and value as well the impact of COVID-driven labor shortages. Cucumbers' and Herbs/Spices' overall value rose 0.3% and 1% respectively, both had increases in the number of tons produced. These slight increases did not offset the overall value decrease of Vegetable and Vine Crops.

The Apiary Products group was valued at \$4,433,270, a 27% decrease from last year. And the value of the Honey & Bees Wax commodities declined 80% from the previous year's value due to less rainfall which supports bees' ability to produce honey.

The Livestock & Poultry group was valued at \$58,808,872, a 2% decrease from last year. However, the overall value for Lambs & Sheep and Cattle & Calves went up due to price increases.

The value of the Field Crops group decreased to \$4,515,221, which is 34% lower than last year. The value of the Field, Other (such as alfalfa, clover, sugarcane) commodities decreased 63% to \$1,394,351 from the previous year. The value of Hay and Oats rose by 14% to \$479,550 due to a price increase.



# HIGHLIGHTS



## 2020 HIGHLIGHTS

<b>TOTAL VALUE OF PRODUCTION</b>	<b>\$1,810,326,411</b>
Total Acreage	224,549
Commodity with Highest Reported Dollar Value	Ornamental Trees & Shrubs
Highest Dollar Value Per Acre	Indoor Flowering & Foliage Plants
Lowest Dollar Per Acre	Rangeland
Greatest % Increase in Total Dollar Value from 2019	Hay, Oat
Greatest % Decrease in Total Dollar Value from 2019	Honey & Beeswax
Commodity with Greatest Amount of Planted Acreage	Avocados



## CROPS BY GROUP

CROP	YEAR	ACRES	TOTAL VALUE
Nursery & Cut Flower Products	2020	11,731	\$1,274,784,274
	2019	12,101	\$1,249,388,514
Fruit & Nut Crops	2020	27,455	\$344,250,521
	2019	29,354	\$341,721,924
Vegetable & Vine Crops	2020	2,918	\$122,665,855
	2019	3,164	\$130,883,159
Field Crops	2020	182,444	\$4,515,221
	2019	189,858	\$6,818,060
Apiary Products	2020		\$4,433,270
	2019		\$6,040,642
Forest Products	2020		\$868,398
	2019		\$855,154

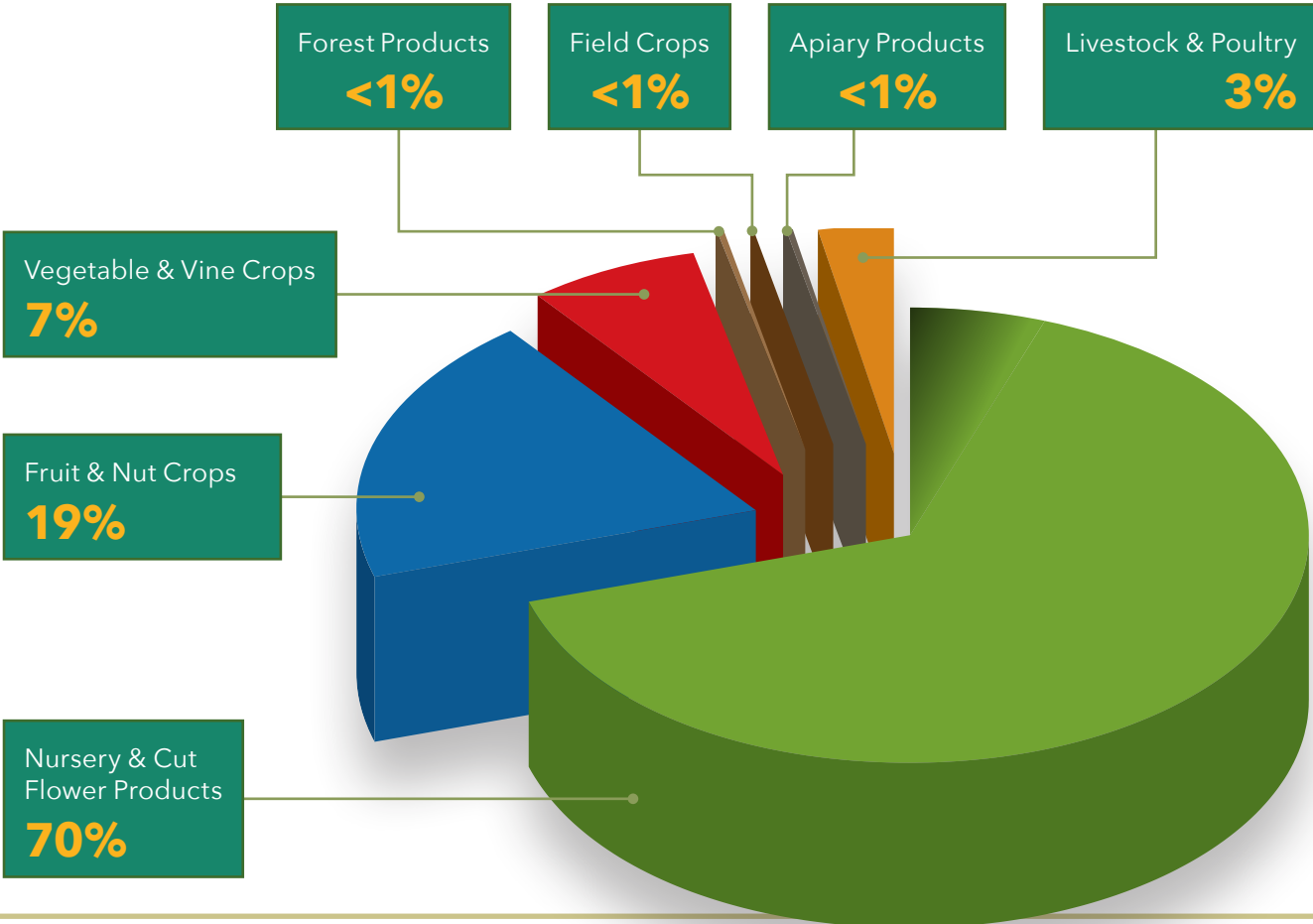


**CROPS BY GROUP CONTINUED**

Livestock & Poultry	2020		\$58,808,872
	2019		\$59,821,120
Totals	2020	224,549	\$1,810,326,411
	2019	234,477	\$1,795,528,573

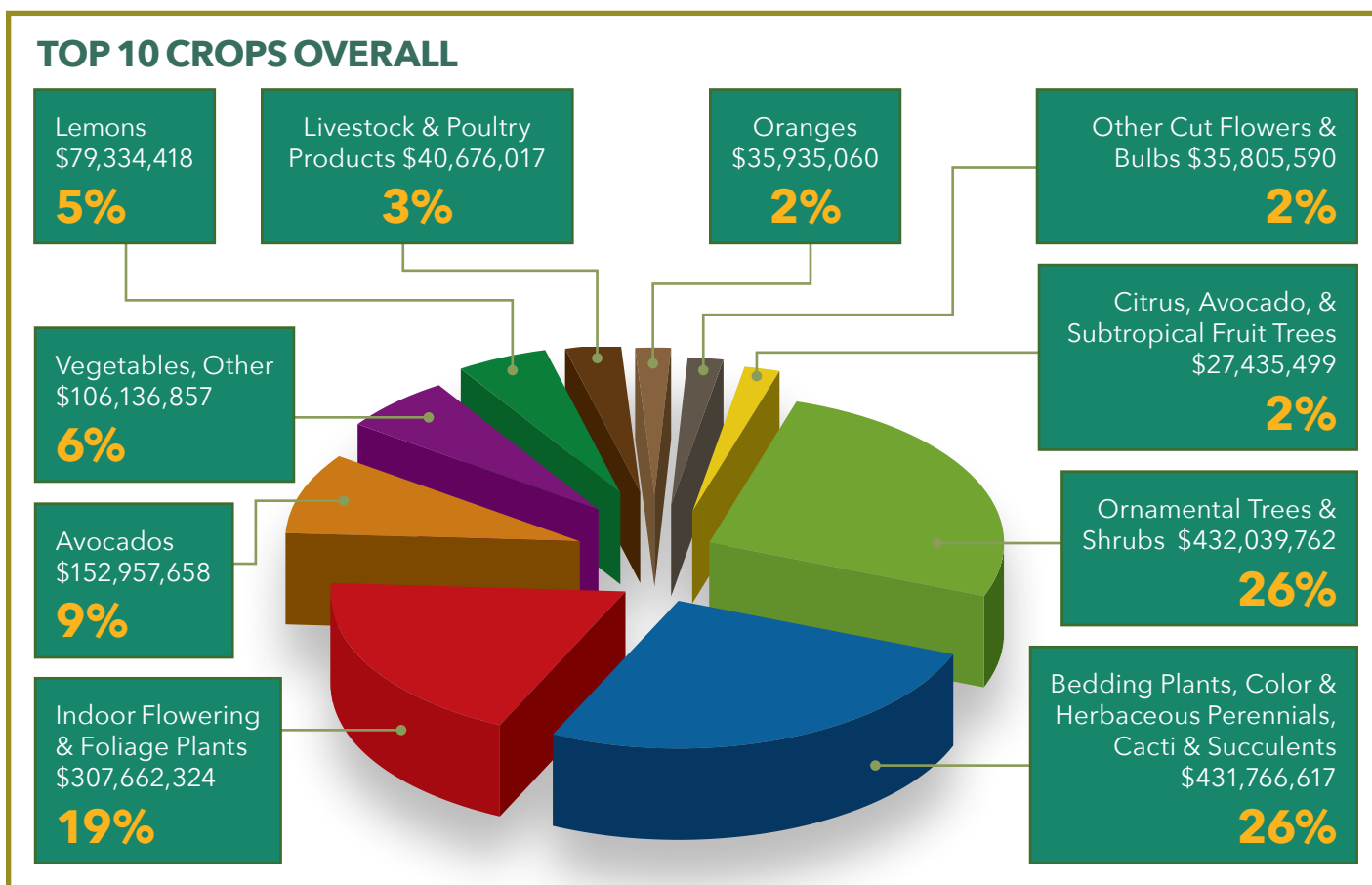


**CROPS BY GROUP OVERALL**



## TOP TEN CROPS

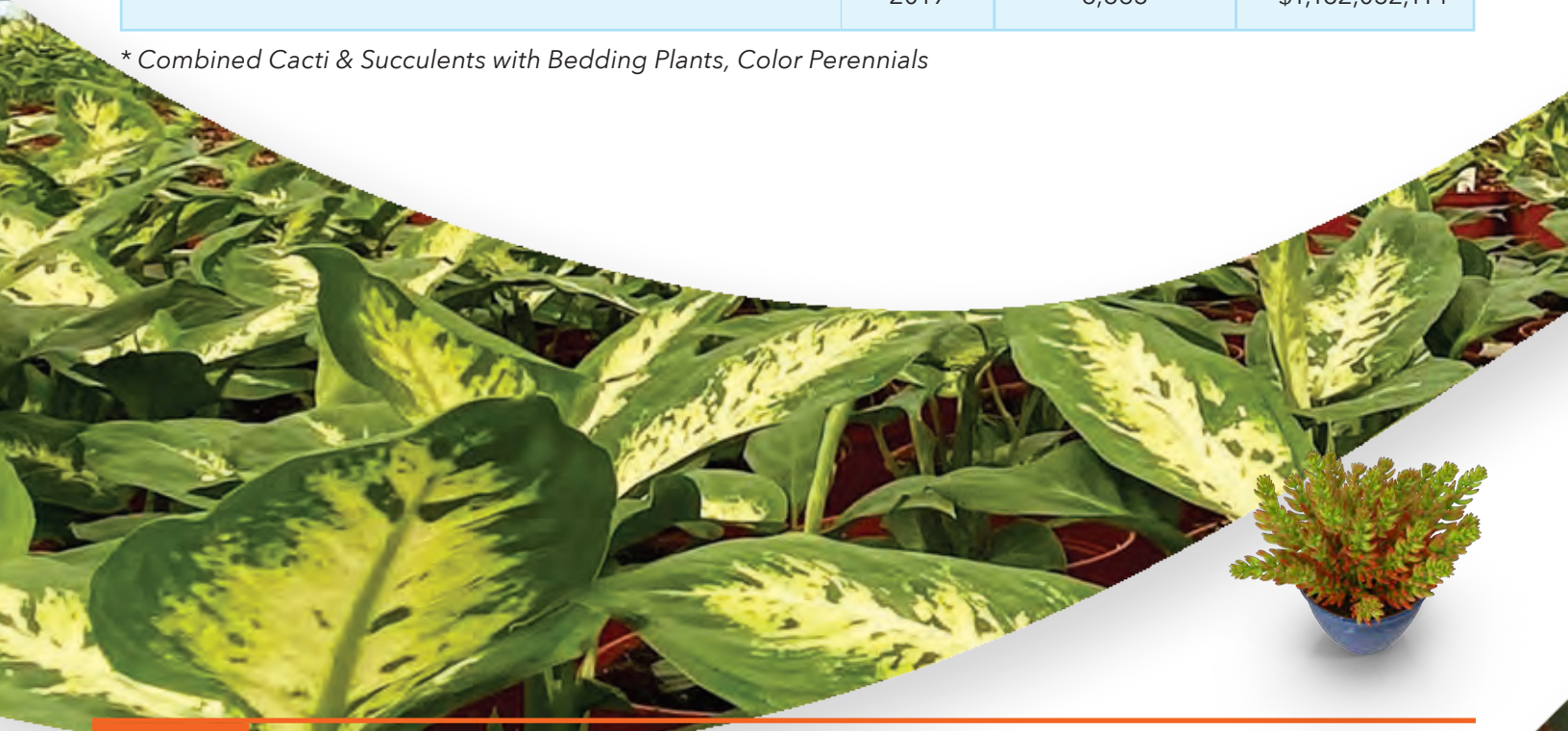
TOP TEN CROPS	GROUP	2020 VALUE
Ornamental Trees & Shrubs	Nursery & Cut Flower Products	\$432,039,762
Bedding Plants, Color & Herbaceous Perennials, Cacti & Succulents	Nursery & Cut Flower Products	\$431,766,617
Indoor Flowering & Foliage Plants	Nursery & Cut Flower Products	\$307,662,324
Avocados	Fruit & Nut Crops	\$152,957,658
Vegetables, Other	Vegetable & Vine Crops	\$106,136,857
Lemons	Fruit & Nut Crops	\$79,334,418
Livestock & Poultry Products	Livestock & Poultry	\$40,676,017
Oranges	Fruit & Nut Crops	\$35,935,060
Other Cut Flowers & Bulbs	Nursery & Cut Flower Products	\$35,805,590
Citrus, Avocado, & Subtropical Fruit Trees	Nursery & Cut Flower Products	\$27,435,499



**NURSERY PRODUCTS**

CROP	YEAR	ACRES	TOTAL VALUE
Bedding Plants, Color, Perennials, Cacti & Succulents	2020	2,092	\$431,766,617
	2019	2,138	\$399,028,516
Cacti & Succulents*	2020	1,002	
	2019	978	
Citrus, Avocado, & Subtropical Fruit Trees	2020	252	\$27,435,499
	2019	234	\$26,816,653
Indoor Flowering & Foliage Plants (including Poinsettia)	2020	879	\$307,662,324
	2019	849	\$291,335,199
Ornamental Trees & Shrubs	2020	4,950	\$432,039,762
	2019	5,002	\$445,488,124
Turf, Cut Christmas Trees & Industrial Hemp	2020	710	\$15,311,534
	2019	660	\$19,363,622
Total Nursery Products	2020	8,884	\$1,214,215,736
	2019	8,883	\$1,182,032,114

\* Combined Cacti & Succulents with Bedding Plants, Color Perennials



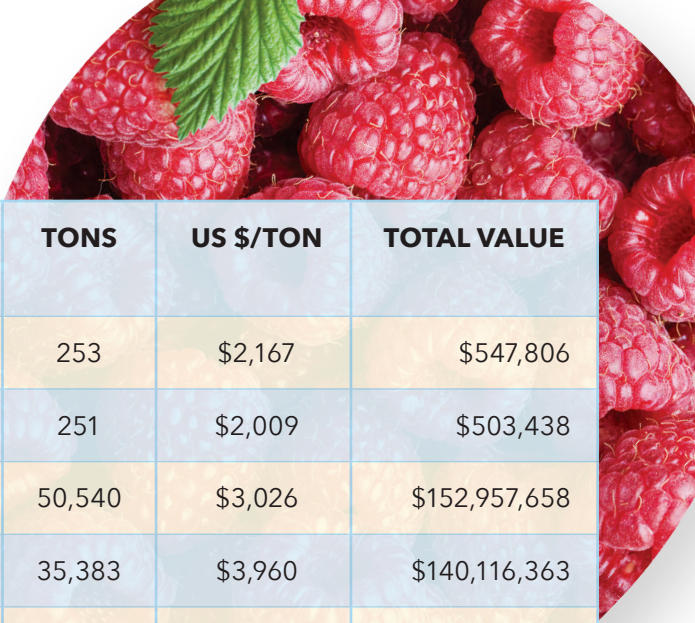
## CUT FLOWER PRODUCTS



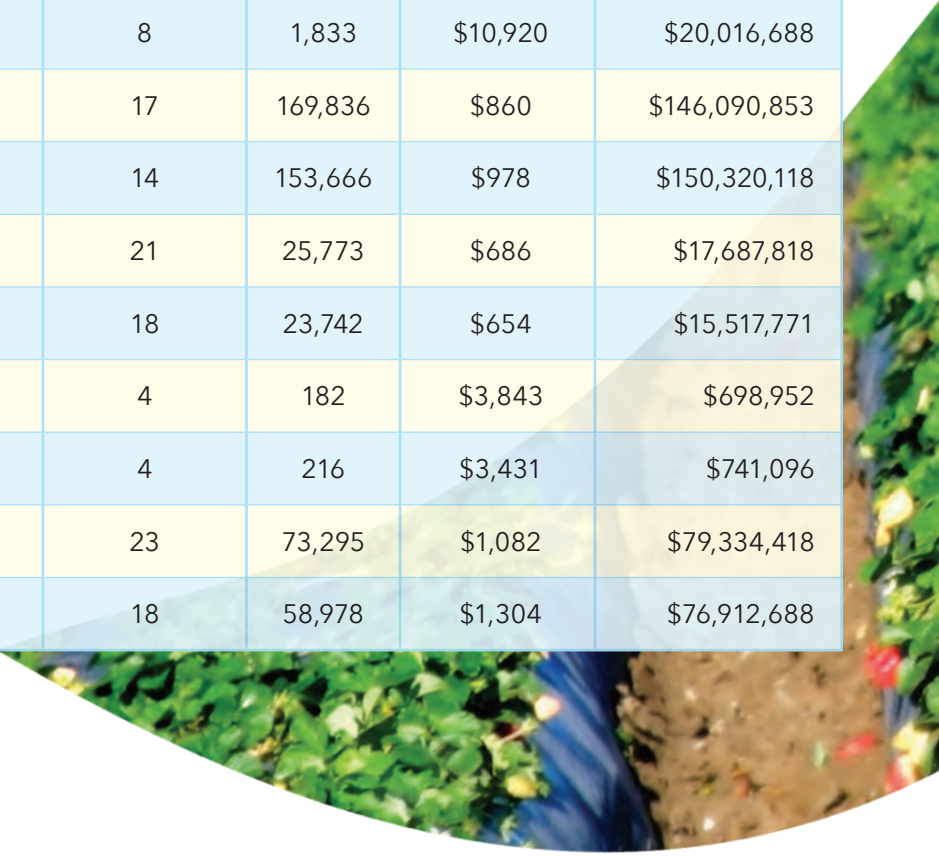
CROP	YEAR	ACRES	TOTAL VALUE
Leptospermum Outdoor	2020	275	\$990,275
	2019	301	\$1,083,262
Proteas Outdoor	2020	464	\$4,238,281
	2019	499	\$4,650,999
Wax Flowers Outdoor	2020	614	\$5,396,868
	2019	690	\$6,131,341
Other Cut Flowers & Bulbs	2020	890	\$35,805,590
	2019	1,098	\$40,578,687
Foliage	2020	605	\$14,137,525
	2019	630	\$14,912,111
<b>Total Cut Flower Products</b>	2020	2,848	\$60,568,539
	2019	3,218	\$67,356,400
<b>Total Nursery &amp; Cut Flower Products</b>	2020	11,731	\$1,274,784,274
	2019	12,101	\$1,249,388,514



**FRUIT & NUT CROPS**



CROP	YEAR	ACRES HARVESTED	TONS/ ACRE	TONS	US \$/TON	TOTAL VALUE
Apples	2020	148	2	253	\$2,167	\$547,806
	2019	174	1	251	\$2,009	\$503,438
Total Avocados	2020	14,421	4	50,540	\$3,026	\$152,957,658
	2019	14,946	2	35,383	\$3,960	\$140,116,363
Hass	2020	13,604	4	48,020	\$3,052	\$146,561,356
	2019	14,117	2	33,934	\$3,956	\$134,255,054
Lamb	2020	614	3	2,107	\$2,607	\$5,491,974
	2019	619	2	1,313	\$4,174	\$5,480,624
Other	2020	203	2	413	\$2,190	\$904,328
	2019	210	1	136	\$2,799	\$380,684
Berries, Other	2020	209	8	1,730	\$9,173	\$15,869,496
	2019	219	8	1,833	\$10,920	\$20,016,688
Total Citrus	2020	9,890	17	169,836	\$860	\$146,090,853
	2019	10,915	14	153,666	\$978	\$150,320,118
Grapefruit	2020	1,245	21	25,773	\$686	\$17,687,818
	2019	1,319	18	23,742	\$654	\$15,517,771
Kumquats	2020	47	4	182	\$3,843	\$698,952
	2019	54	4	216	\$3,431	\$741,096
Lemons	2020	3,257	23	73,295	\$1,082	\$79,334,418
	2019	3,351	18	58,978	\$1,304	\$76,912,688



## FRUIT &amp; NUT CROPS

CROP	YEAR	ACRES HARVESTED	TONS/ ACRE	TONS	US \$/TON	TOTAL VALUE
Limes	2020	175	6	1,046	\$1,903	\$1,989,312
	2019	190	6	1,102	\$1,902	\$2,096,004
Oranges	2020	4,402	14	60,219	\$597	\$35,935,060
	2019	5,179	11	59,041	\$710	\$41,942,442
Tangerines, Tangelos	2020	764	12	9,321	\$1,121	\$10,445,293
	2019	822	13	10,587	\$1,238	\$13,110,116
Grapes, Wine	2020	1,372	2	3,073	\$1,694	\$5,206,091
	2019	1,511	2	3,596	\$1,552	\$5,580,300
Fruit & Nuts, Other	2020	1,082				\$9,353,077
	2019	1,242				\$10,191,569
Persimmons	2020	133	5	655	\$2,017	\$1,321,617
	2019	162	5	826	\$2,058	\$1,700,320
Strawberries	2020	200	27	5,397	\$2,391	\$12,903,923
	2019	185	29	5,393	\$2,465	\$13,293,129
Total Fruit & Nut Crops	2020	27,455				\$344,250,521
	2019	29,354				\$341,721,924



## VEGETABLE & VINE CROPS

CROP	YEAR	ACRES HARVESTED	TONS/ ACRE	TONS	US \$/TON	TOTAL VALUE
Cucumbers	2020	63	10	632	\$1,505	\$950,910
	2019	62	10	620	\$1,529	\$947,856
Herbs/Spices	2020	171	9	1,607	\$6,563	\$10,549,623
	2019	164	10	1,640	\$6,372	\$10,450,080
Squash	2020	380	9	3,427	\$1,468	\$5,028,465
	2019	381	9	3,581	\$1,499	\$5,368,519
Vegetables, Other	2020	2,304				\$106,136,857
	2019	2,557				\$114,116,705
Tomatoes*	2020	1,197				
	2019	1,154				
Total Vegetable & Vine Crops	2020	2,918				\$122,665,855
	2019	3,164				\$130,883,159

\* Combined Tomatoes with Vegetables, Other

## LIVESTOCK & POULTRY

COMMODITY	YEAR	NUMBER OF HEAD	TOTAL WEIGHT CWT	US \$/CWT	TOTAL VALUE
Cattle & Calves	2020	13,300	119,700	\$114	\$13,698,468
	2019	13,200	118,800	\$109	\$12,949,200
Hogs & Pigs	2020	1,455	3,638	\$60	\$218,295
	2019	1,558	3,896	\$58	\$225,939
Chickens	2020		61,299	\$67	\$4,107,779
	2019		63,195	\$76	\$4,812,453
Lambs & Sheep	2020	952	952	\$114	\$108,314
	2019	960	960	\$111	\$106,560
Livestock & Poultry Products	2020				\$40,676,017
	2019				\$41,726,968
Total Livestock & Poultry	2020				\$58,808,872
	2019				\$59,821,120

## FOREST PRODUCTS

COMMODITY	YEAR	TOTAL VALUE
Timber	2020	\$15,908
	2019	\$14,434
Firewood	2020	\$852,490
	2019	\$840,720
Total Forest Products	2020	\$868,398
	2019	\$855,154





## FIELD CROPS

COMMODITY	YEAR	ACRES	TONS/ACRE	TONS	US\$/TON	TOTAL VALUE
Hay, Oat	2020	1,725	2	3450	\$139	\$479,550
	2019	1,874	2	3748	\$112	\$419,963
Pasture, Irrigated	2020	739				\$1,472,827
	2019	719				\$1,432,949
Range	2020	179,768				\$1,168,493
	2019	185,328				\$1,204,631
Field, Other	2020	212				\$1,394,351
	2019	1,937				\$3,760,517
Total Field Crops	2020	182,444				\$4,515,221
	2019	189,858				\$6,818,060

## APIARY PRODUCTS

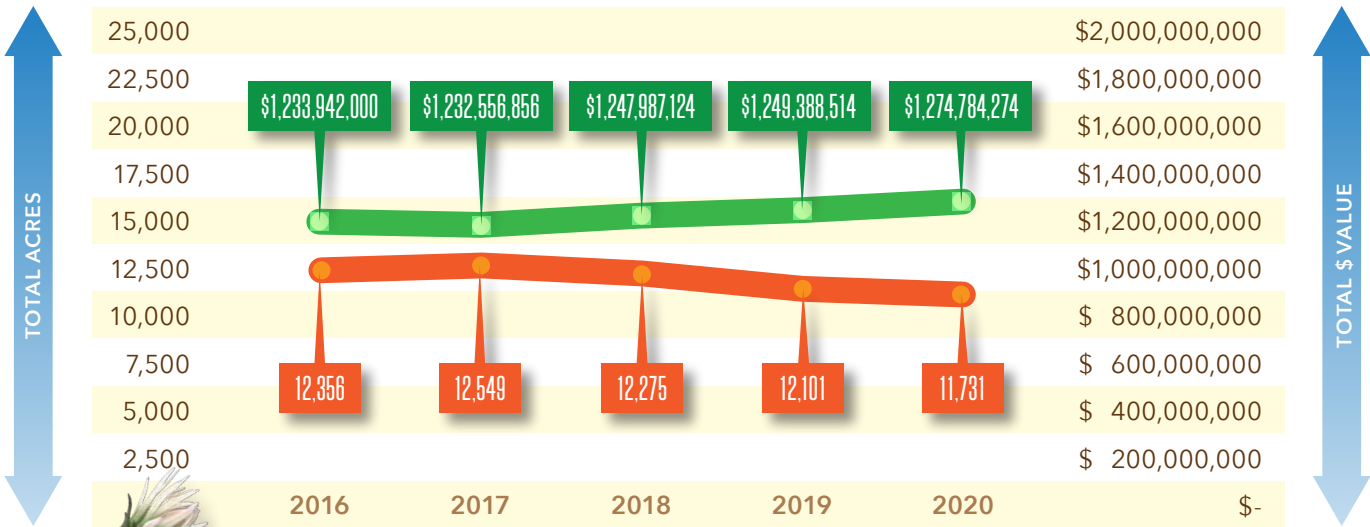
COMMODITY	YEAR	TOTAL VALUE
Honey & Bees Wax	2020	\$516,890
	2019	\$2,540,332
Pollination	2020	\$3,916,380
	2019	\$3,500,310
Total Apiary Products	2020	\$4,433,270
	2019	\$6,040,642



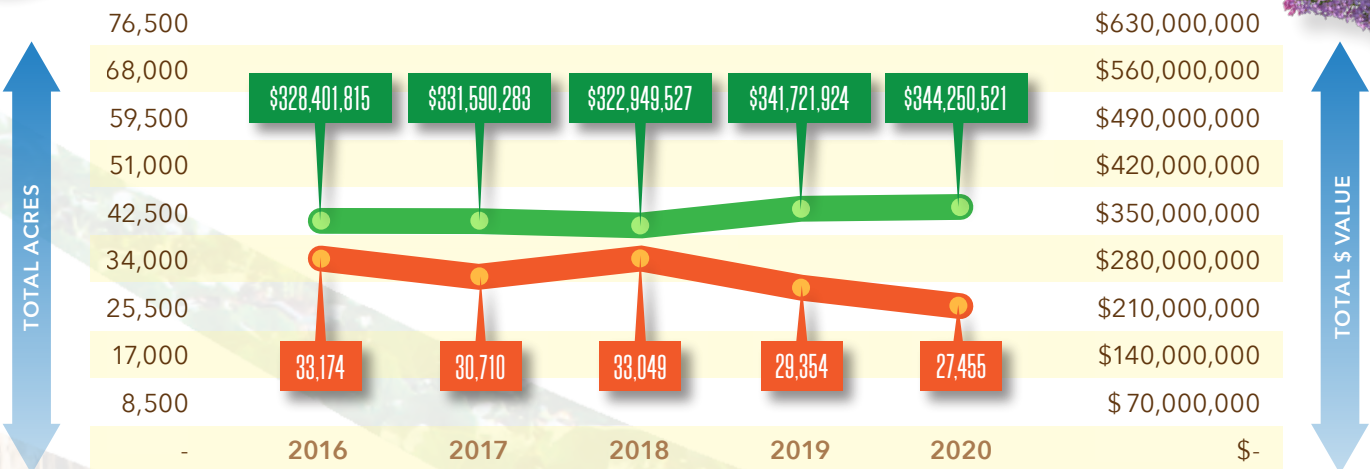
# FIVE YEAR TREND ANALYSIS

TOTAL ACRES  
TOTAL \$ VALUE

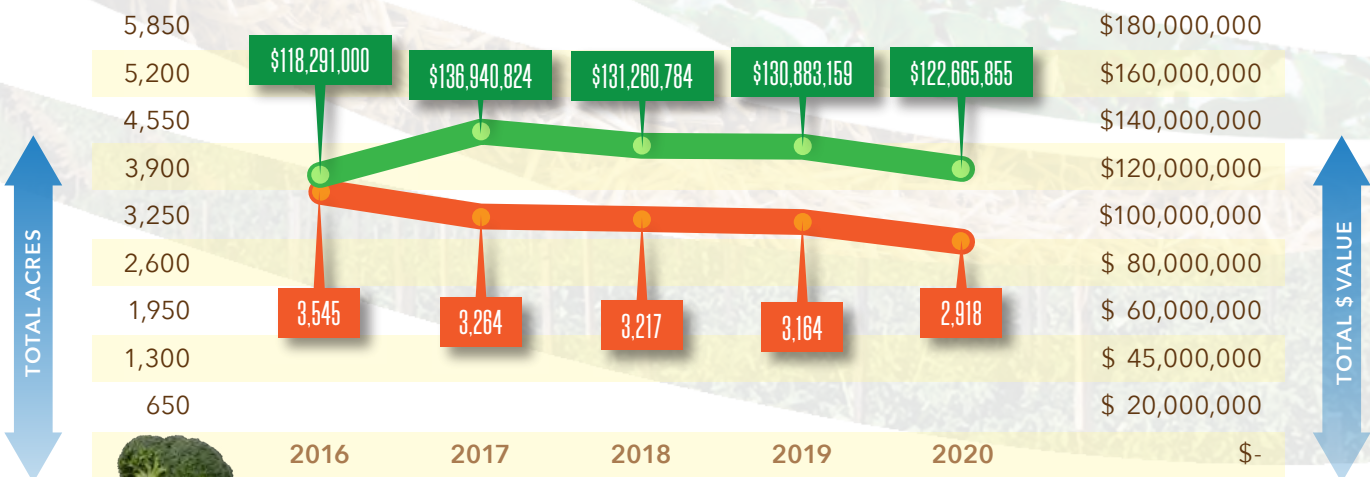
## NURSERY & CUT FLOWER PRODUCTS



## FRUIT & NUT CROPS

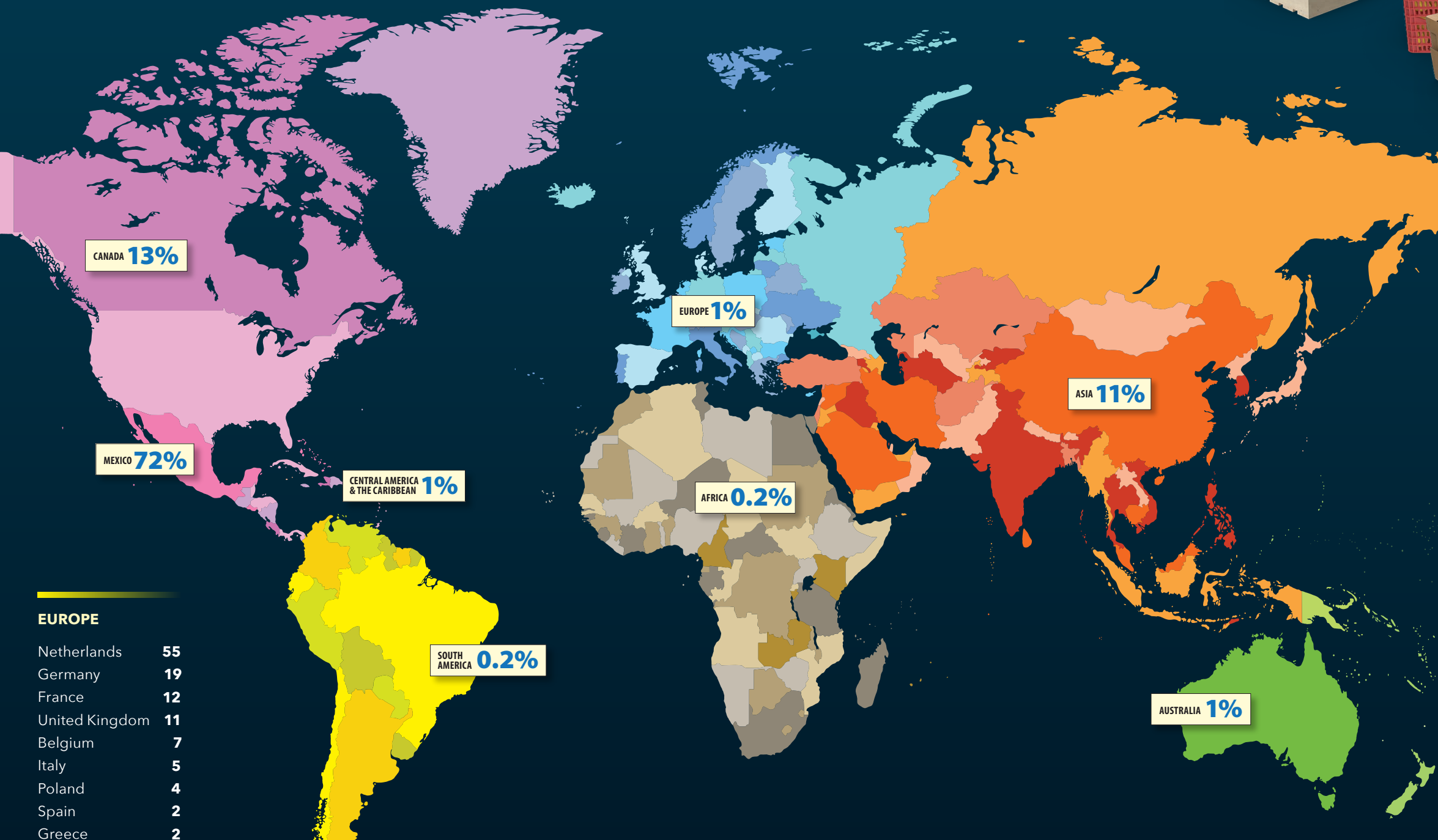


## VEGETABLE & VINE CROPS



# INTERNATIONAL TRADING PARTNERS

IN 2020 WE CERTIFIED 8,012 SHIPMENTS OF PLANT MATERIAL (INCLUDING FRUITS AND VEGETABLES) GOING TO 39 COUNTRIES



**TOP TRADING PARTNERS**

Mexico	5,798
Canada	1,074
Total	6,872

**CENTRAL AMERICA & THE CARIBBEAN**

Guatemala	21
Honduras	12
Bahamas	11
Costa Rica	11
El Salvador	5
Trinidad and Tobago	1
Total	61

**SOUTH AMERICA**

Chile	16
Ecuador	3
Total	19

**EUROPE**

Netherlands	55
Germany	19
France	12
United Kingdom	11
Belgium	7
Italy	5
Poland	4
Spain	2
Greece	2
Armenia	1
Total	118

**AFRICA**

Egypt	11
South Africa	9
Total	20

**ASIA**

Japan	487
Korea, Republic of	149
Taiwan	49
Hong Kong	43
New Zealand	39
Thailand	31
Singapore	21
China	19
United Arab Emirates	12
India	5
New Caledonia	2
Israel	2
Macau	1
Mongolia	1
Saudi Arabia	1
Indonesia	1
Total	863

**AUSTRALIA**

Australia	59
Total	59

**Domestic Trading**

Top issued certificates of commodities grown in **San Diego County** exported in the United States

Commodity: **Ornamental Trees & Shrubs**  
Certificates: **517**

Commodity: **Cacti & Succulents**  
Certificates: **269**

Commodity: **Indoor Flowering & Foliage Plants**  
Certificates: **156**

# SUSTAINABLE AGRICULTURE



## Sustainable Agriculture 2020



Sustainable agriculture promotes the economic viability of agriculture while preserving natural resources and the environment. Pest prevention activities are essential to prevent the spread of exotic pests and ensure a sustainable agricultural industry in California.

The County of San Diego Department of Agriculture, Weights and Measures administers state regulatory programs for the detection, control, and eradication of insect pests, plant diseases, and invasive weeds, and enforces agricultural quarantines to prevent the spread of invasive pests.

Pest ratings inform county agricultural commissioners and other interested persons of a pest's potential to harm agriculture and the environment. The pest rating also signifies its potential impact to the general public by interfering with home/urban gardens and food security. Finally, the pest rating guides the regulatory actions that county agricultural commissioners and the California Department of Food and Agriculture (CDFA) must take to mitigate these pest risks.

Below is a list of CDFA pest rating definitions the Department follows:

**A-rated:** A pest or disease that is known to have a detrimental impact on agriculture and the environment, and is not known to be established in California.

**B-rated:** A pest or disease that is known to have a detrimental impact on agriculture and the environment, and is established in some areas of California.

**C-rated:** A pest or disease that commonly occurs in the agricultural industry and the environment and is found throughout California.

**Q-rated:** A pest or disease requiring a temporary "A" rating pending the determination of a permanent rating. These organisms are usually new to California or their impacts are unknown but are suspected of being economically harmful to agriculture.

The infographics on the following two pages show the work the Department performs to support sustainable agriculture in San Diego.

# SUSTAINABLE AGRICULTURE

## HIGH RISK PEST EXCLUSION

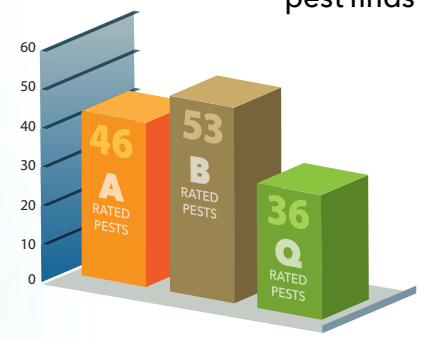
**6,299**  
Incoming plant shipment inspections



**86**  
Notices of rejection

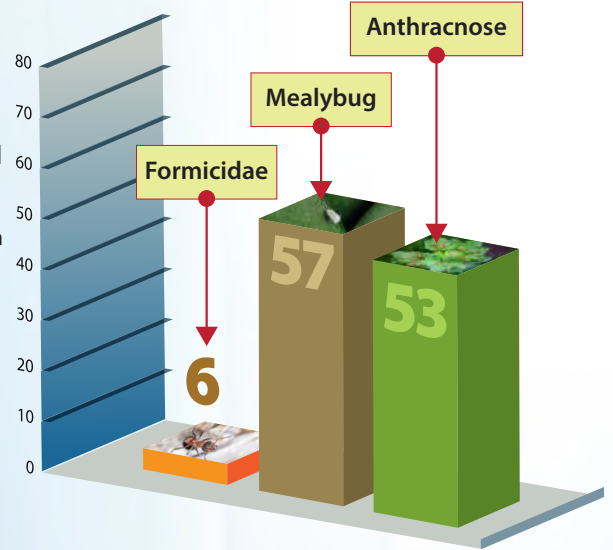


**135**  
Actionable pest finds



## INTERCEPTED PESTS

AWM inspectors intercepted and remedied a total of six ant (Formicidae) infestations on incoming shipments of nursery stock. Ants are particularly important pests due to their colonial nature and complex behaviors. Invasive ants are known to displace native insects and will defend plant feeding pests from natural predators. Plant feeding pests excrete excess sugars, which the ants then harvest. AWM also intercepted and remedied a total of 57 scale and mealybug insect infestations (Families Coccidae, Diaspididae, and Pseudococcidae) and 53 anthracnose fungal infestations (Colletotrichum sp.). Both are known to be particularly hard to treat and damaging to horticultural products.

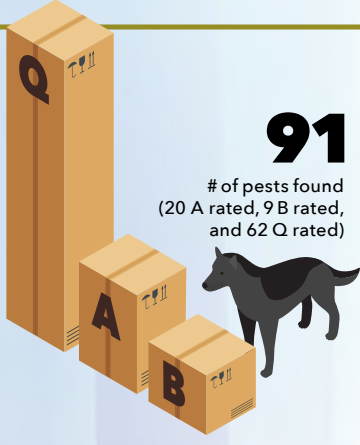


## DETECTOR DOG TEAMS

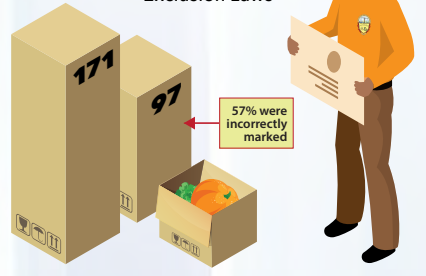
**5,448**  
# of FedEx, UPS and Ontrac packages alerted on by detector dogs.



**91**  
# of pests found (20 A rated, 9 B rated, and 62 Q rated)



**171** Issued for packages in violation of State Pest Exclusion Laws



# SUSTAINABLE AGRICULTURE



## PEST IDENTIFICATION LAB

Our Pest Identification Lab provides rapid identification allowing a quick response in the fight against invasive pests that damage agricultural crops and landscape plants. Some have a known economic importance (A-rated) and others are suspected of economic importance (Q-rated).

### Rated pests identified

**87** A-rated

**93** Q-rated

## INTEGRATED PEST CONTROL

The Integrated Pest Control Program (IPC) protects the county’s agriculture, sensitive habitats, native wild-life, and endangered species by controlling noxious and invasive weeds in cooperation with other county departments and agencies.

## Invasive Weeds

<p>Weed Species: <b>Voluntaria, Voluntaria sp.</b></p> <p>Rating: <b>A</b></p> <p>Acreage Survey /Treated: <b>61.6</b></p> 	<p>Weed Species: <b>Ward's weed, Carrichtera annua</b></p> <p>Rating: <b>A</b></p> <p>Acreage Survey/Treated <b>41.9</b></p> 	<p>Weed Species: <b>Spotted knapweed, Centaurea maculosa</b></p> <p>Rating: <b>A</b></p> <p>Acreage Survey /Treated: <b>6.7</b></p> 	<p>Weed Species: <b>Canary Island St. Johns wort, Hypericum canariense</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey /Treated: <b>68.05</b></p> 	<p>Weed Species: <b>Barbed Goatgrass, Aegilops triuncialis</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey/Treated: <b>35.1</b></p> 	<p>Weed Species: <b>Algerian sea lavender, Limonium ramosissimum</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey /Treated: <b>8.8</b></p> 
<p>Weed Species: <b>Bridal broom, Retama monosperma</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey/Treated: <b>2.5</b></p> 	<p>Weed Species: <b>Carnation Spurge, Euphorbia terracina</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey /Treated: <b>1.9</b></p> 	<p>Weed Species: <b>European sea lavender, Limonium duriusculum</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey /Treated: <b>1.7</b></p> 	<p>Weed Species: <b>Yellow starthistle, Centaurea solstitialis</b></p> <p>Rating: <b>C</b></p> <p>Acreage Survey /Treated: <b>8.2</b></p> 	<p>Weed Species: <b>French Broom, Genista monspessulana</b></p> <p>Rating: <b>C</b></p> <p>Acreage Survey/Treated: <b>0.8</b></p> 	<p><b>Total Acreage Survey/Treated 237.25</b></p>



# SAN DIEGO AGRICULTURE: STRONGER TOGETHER



As leaders of a vital industry, essential to human life and civilization, agricultural producers and allied industry members steadfastly continued their work and forged ahead during 2020. The innovation and resilience of San Diego’s agriculture industry fueled its ability to quickly pivot during the unique circumstances brought on by the global pandemic of 2020. Despite facing disrupted supply chains and the need to retool business models, as well as a labor shortage and the need to protect workers against the virus, San Diego’s agriculture industry prevailed. While most segments of the industry suffered losses in the first half of the year, several rebounded in the second half. In fact, the overall value of the industry increased 0.8% to \$1.8 billion in 2020.

Here are some of the ways local agricultural producers adapted in 2020:



- ▶ Many agricultural producers shifted their focus to a Community Supported Agriculture (CSA) business model, where farmers sell their seasonal products direct to consumers via a subscription service. CSA boxes for some farmers increased tenfold when the pandemic shutdowns started.





- ▶ Farmers and ranchers found new ways to sell directly to consumers by reviving or opening new roadside or drive-thru farm stands, focusing on farmers markets and offering local delivery of their products including nursery plants, flowers, soaps, wine, honey, hemp products, eggs, grass fed beef, citrus, guavas, passion fruit, avocados, mushrooms, berries, vegetables, herbs and much more.
- ▶ Agricultural businesses, especially those with large numbers of fieldworkers or packinghouse employees, instituted new and rigorous hygiene practices and other protective measures to safeguard worker well-being. Measures included daily temperature checks, handwashing stations, increased sanitation of equipment and workspaces, face coverings, and social distancing. Other strategies included increased safety trainings and assignment of tasks by cohorts to decrease the likelihood of the spread of COVID-19.

With the support of the County of San Diego Board of Supervisors, Department of Agriculture, Weights and Measures (AWM) provided essential services to local agricultural operations. Here are a few examples:

- ▶ In 2020, to help ease the economic impacts of COVID-19, the County Board of Supervisors unanimously voted to defer fee payments associated with export certification, direct marketing, and hazardous materials inventory for a total of \$551,088. This allowed growers to use those funds for more immediate operational needs during the pandemic.
- ▶ Partnering with State agencies, AWM distributed approximately 365,000 pieces of personal protective equipment to agricultural businesses and farmworkers at drive-thru events in 2020, and an additional 465,500 pieces from January to May of 2021 for a total of 830,500 pieces.
- ▶ AWM completed 381,496 inspections and investigations to ensure business continuity as food and agriculture is a critical infrastructure sector while taking the necessary preventive measures to safeguard staff well-being.
- ▶ AWM conducted 116 virtual inspections to verify agricultural production and organic practices for the Direct Marketing and Organic Programs, resulting in a savings of 155 staff hours of drive time, and a reduction of 6,890 vehicle miles traveled.



▶ AWM increased the virtual services available to residents and the agricultural industry. For example, AWM’s lab began offering virtual identification and diagnosis of insect pests and plant diseases. AWM partnered with UCCE to provide virtual diagnoses of plant ailments and pest issues to residents. Two drop boxes were installed at the Kearny Mesa and San Marcos offices so residents and agricultural industry members could drop off samples by appointment. In addition, AWM updated its website to make the programs and services provided by AWM more accessible to the agricultural industry and county residents through multiple languages and user-friendly interfaces.

2020 will be remembered as a marathon to stay ahead of the pandemic and its economic, social, mental, and physical impacts. San Diego’s agricultural producers and allied industry members with governmental support persevered during the pandemic and severe economic downturn by adapting and forging ahead. As we slowly emerge on the other side of this global pandemic, we can all attest that making it through 2020 was a team effort. Moving forward, our continued partnerships will help to shape our future and remind us we are stronger together.

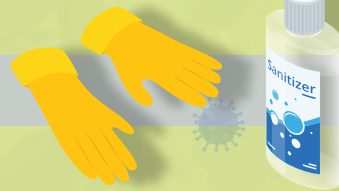
By Deputy Agricultural Commissioner/Sealer Jason Schwartze



**AWM DISTRIBUTED PERSONNEL PROTECTIVE EQUIPMENT**



Type	Total Distributed
N95 Particulate Respirator	131,325
Disposable Surgical Masks	575,800
Cloth Face Coverings	17,185
Pairs of Safety Gloves	104,400
Hand Sanitizer Bottles 16.9oz	1,842
<b>Grand Total *</b>	<b>830,552</b>



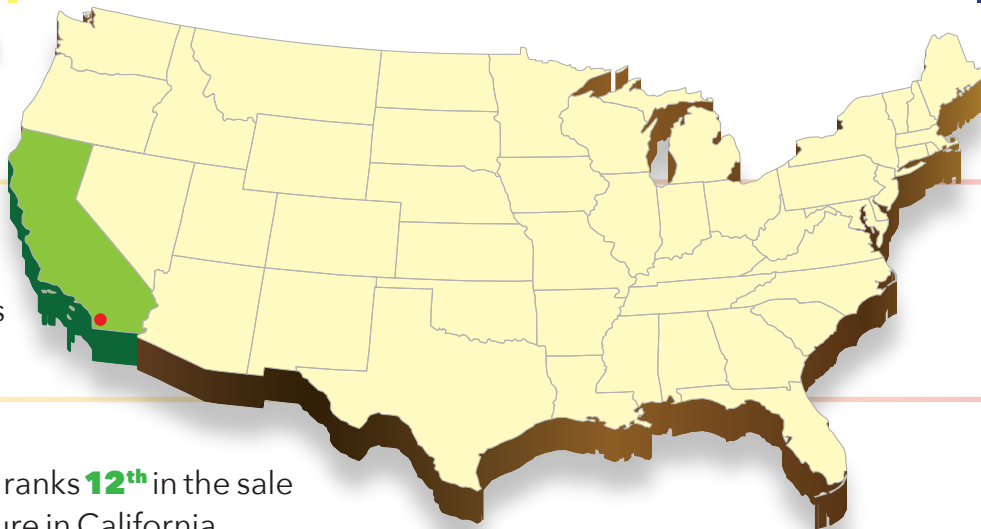
\* Total personal protective equipment and sanitizing supplies distributed from January 2020 till May 2021

# COUNTY PROFILE

San Diego ranks **1<sup>st</sup>** in the number of organic producers in California



62% of the world's Certified Organic Operations are in the United States



California is the leader in Certified Organic Operations in the United States



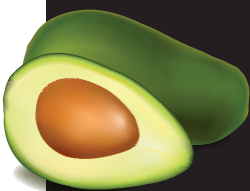
San Diego ranks **12<sup>th</sup>** in the sale of agriculture in California

**\$1.8 Billion**

is the total value of agriculture in San Diego, which is higher than the Gross Domestic Product that is reported for more than 2000 counties in the United States.

## San Diego is the top leader in California in the sale of flowers and foliage

San Diego ranks **NO. 1** in nursery products sales in California, while nursery products ranks **5<sup>th</sup>** in the sale of agriculture in California



## San Diego is the top leader in California in the sale of avocados

San Diego's top ranked commodities in the State of California:



**SOURCE:**

Growth in the Number of Certified Organic Operations Continues in 2020. USDA. 2021. <https://content.govdelivery.com/accounts/USDAAMS/bulletins/2ba210e>  
California Agricultural Statistics Review 2019-2020. PDF File. [https://www.cdfa.ca.gov/Statistics/PDFs/2020\\_Ag\\_Stats\\_Review.pdf](https://www.cdfa.ca.gov/Statistics/PDFs/2020_Ag_Stats_Review.pdf)  
Bureau of Economic Analysis U.S. Department of Commerce. 2019. <https://www.bea.gov/data/gdp/gdp-county-metro-and-other-areas>

# PROGRAMS AND SERVICES





# Programs and Services - 2020 highlights



**The Pest Exclusion Division** is the first line of defense in keeping unwanted pests out of our county. We inspect incoming and outgoing plant shipments and production nurseries to look for harmful agricultural pests and support agricultural trade.

6,299 incoming plant shipments inspected with 135 actionable pest finds

497 nurseries, comprising 10,430 acres, inspected for pests and diseases

154,885 glassy-winged sharpshooter traps inspected in nurseries

**The Detector Dog Team Program** supports the statewide pest prevention network by using agricultural detector dogs to check shipments at parcel facilities.

377 incorrectly marked packages containing plant material were intercepted by the Detector Dog Teams at terminal facilities

**The Pest Detection Program** is a critical component of our statewide pest prevention network. There were 203,055 insect traps inspected throughout the county. The traps are used to detect insect pests, such as invasive fruit flies, Gypsy moth, Japanese beetle, and light brown apple moth that pose threats to California’s agricultural and horticultural crops. There were several pests detected within the county, and the Program assisted both state and federal agencies in conducting activities to promptly and effectively eradicate the pests. Early detection of pests allows eradication efforts to begin before pests multiply and spread, becoming economically challenging to control.

**The Pest Identification Lab** provides rapid identification allowing a quick response in the fight against invasive pests that damage agricultural crops and landscape plants. Our Lab also partners with the California Department of Food and Agriculture, the University of California Cooperative Extension (UCCE) Master Gardeners and UCCE advisors to help residents and the agricultural industry identify weeds, insect pests and plant diseases that may be harmful to agricultural crops and landscape plants.

Performed 7,016 pest identifications from plant and insect samples

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**The Citrus Quarantine Program** is tasked with ensuring that the citrus industry is in compliance with state regulations and quarantines regarding the Asian citrus psyllid (ACP) insect. ACP spreads Huanglongbing (HLB), the most destructive disease known to citrus. Controlling the movement of ACP reduces the risk of HLB. The program's primary goal is to mitigate the risk of HLB in the county.

Performed 212 grower inspections

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Performed 226 transporter inspections

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Performed 113 packinghouse inspections

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Performed 16 fruit seller inspections

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Issued 29 compliance agreements

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**The Honey Bee Protection Program** educates beekeepers on county and state apiary regulations including the requirement of beekeepers to register their hive locations with the county agricultural commissioner. Registration supports contact with beekeepers for the exchange of important information on pesticide applications, quarantines, and best management practices.

Registered 271 beekeepers, totaling 27,031 managed honey bee colonies in 713 apiary locations

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**The Pesticide Regulation Program** enforces state pesticide laws and regulations. Inspections, complaint and illness investigations, and evaluations of restricted material permits all support the safe and legal use of pesticides while protecting human health and safety and the environment.

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Conducted 939 pesticide regulation inspections

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Conducted 59 hazardous materials inventory inspections

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Completed 73 pesticide/antimicrobial investigations

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Investigated 69 complaints

---

Issued 150 restricted materials permits

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Conducted 5 outreach events reaching over 296 people

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Participated in 3 stakeholder meetings

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Issued 13 cease and desist orders

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Took 59 enforcement actions and 124 compliance actions

**The Agricultural Standards Division (AGS)** supports the sustainability of local agriculture, ensures integrity in the marketplace, and promotes healthy families by inspecting fruits, vegetables, and other agricultural commodities for compliance with laws and regulations. Activities include inspecting certified farmers markets and certified producers, testing citrus for maturity and organic produce for pesticide residue. In addition, AGS promotes public safety and ensures the lawful cultivation of industrial hemp by overseeing grower registration and crop sampling, testing and harvesting.

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Issued certificates to 31 certified farmers markets and 182 certified producers in San Diego county

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Conducted 68 fruit and vegetable standardization inspections

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Registered 334 organic growers in San Diego county

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Issued registrations to 81 growers who harvested 198 acres of industrial hemp

**The Agricultural Water Quality Program** performs inspections at nurseries and greenhouses ensuring compliance with the County's Stormwater Permit mandated by the San Diego Regional Water Quality Control Board. Inspections, education, and investigations focus on preventing non-stormwater discharges, such as fertilizers, pesticides, and sediment into local waterways.

Completed 188 inspections

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Investigated 46 complaints

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**The Integrated Pest Control Program** works under the Board of Supervisors’ policy mandating the use of Integrated Pest Management (IPM) procedures, which is an effective and environmentally sound approach to performing pest control. IPM incorporates current scientific information and control methods to manage and eradicate weeds and pests while mitigating the hazard to people, property, and the environment. Integrated Pest Control’s weed control work preserves road visibility and clearance; reduces fire danger along roadways and intersections; enhances drainage to prevent flooding; and keeps roadside shoulders visible and easy to access.

Treated with herbicides or manually removed 3,022 acres of weeds

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Treated 180 county facilities for structural pests

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**The Civil Actions Program** supports the Department’s civil penalty process to gain regulatory compliance. As a result of violations, regulatory programs throughout the Department issued the 204 civil penalty actions listed below:

152 for weights & measures

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21 for structural pesticide use

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28 for agricultural pesticide use

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3 for agricultural standards

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**The Weights and Measures Division** ensures consumers get what they pay for and supports fair competition between businesses in the marketplace. The division performs inspections to verify accuracy of product weight, measure, and price. These inspections include testing of commercial weighing and measuring devices, labeling and advertising requirements for petroleum products, price verification (scanners), quantity control for packages, and weighmaster compliance.

Inspected 48,657 commercial weighing and measuring devices with a 89.7% compliance rate

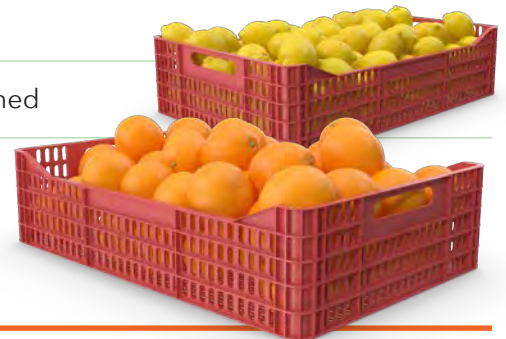
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Investigated 204 consumer complaints regarding commercial meters and scales, petroleum, package/labeling, and price overcharges

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Inspected 967 retail locations for price accuracy with 16,112 items scanned

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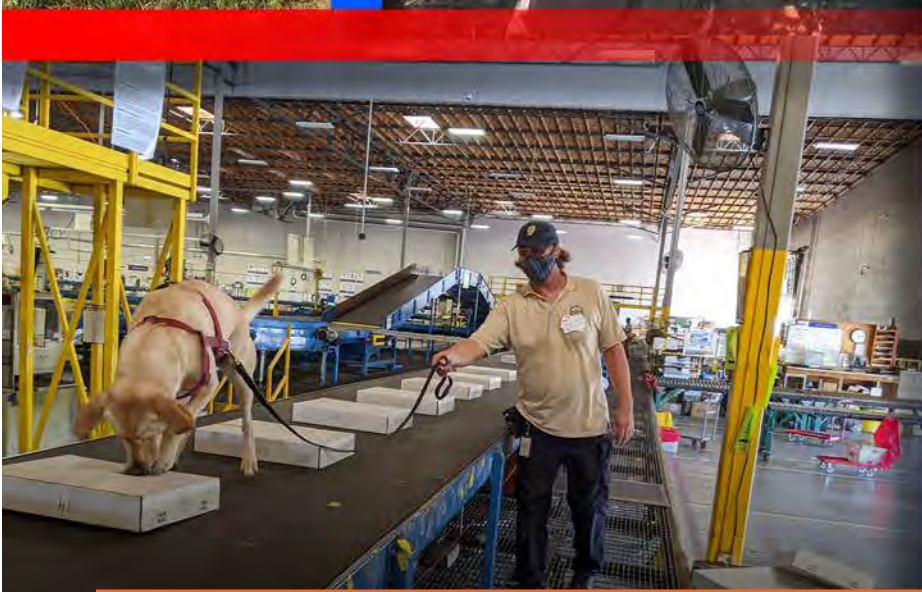




<b>PROGRAM</b>	<b>SERVICES</b>	<b>HOW TO REACH STAFF</b>
Agricultural Hazardous Materials Inventory	Inspections and registrations of agricultural hazardous materials; and California Environmental Reporting System assistance	<b>858-694-8980</b> <b>FAX: 858-467-9277</b>
Agricultural Standards	Certified farmers markets and certified producer certificates; organic handler/producer; fruit and vegetable standardization; industrial hemp cultivation; agricultural stormwater	<b>858-614-7786</b> <b>FAX: 858-467-9273</b>
Citrus Quarantine	Inspections of Asian citrus psyllid quarantine requirements	<b>858-614-7770</b> <b>FAX: 858-467-9697</b>
Detector Dog Teams	Parcel inspections at the USPS sorting facilities	<b>858-614-7770</b> <b>FAX: 858-467-9697</b>
Entomology	Insect identification for regulatory purposes; pest surveys	<b>858-614-7738</b> <b>FAX: 858-467-9697</b>
Honey Bee Protection	Apiary registration, hive inspections, complaint investigations, honey bee education, and outreach	<b>858-614-7738</b> <b>FAX: 858-467-9697</b>
Integrated Pest Control	Weed control, habitat restoration, and structural pest control.	<b>858-614-7550</b> <b>FAX: 858-467-9279</b>
Pest Exclusion (Import/Export; Nursery; Light Brown Apple Moth; Pierce's Disease; Sudden Oak Death)	Inspections of incoming and outgoing plant commodity shipments; phytosanitary and quarantine compliance certificates; nursery inspections; Gypsy moth inspections	<b>760-752-4700</b> <b>Inspection Request Line:</b> <b>760-752-4713</b> <b>FAX: 760-724-4098</b>
Pest Detection	Invasive insect trapping, such as invasive fruit flies, Gypsy moth, and Japanese beetle	<b>858-614-7770</b> <b>800-300-TRAP(8727)</b> <b>FAX: 858-467-9697</b>
Pesticide Regulation	Pest control business registration; operator identification numbers; pesticide use reporting; restricted materials permits; employee pesticide training; pesticide complaints	<b>858-694-8980</b> <b>FAX: 858-467-9277</b>
Weights and Measures	Price verification (price scanners) and commercial weighing and measuring device registration and inspections; weighmaster; petroleum quality/labeling; package and labeling inspections	<b>858-694-2778</b> <b>FAX: 858-467-9278</b> <b>Meter Testing Lab Hours:</b> <b>8:00am-5:00pm M-F</b>
AWM	All Services	<b>858-694-2739</b> <b>www.sdcawm.org</b> <b>sdcawm@sdcounty.ca.gov</b>

**The 2020 Crop Statistics and Annual Report was produced by Operations Research Analyst Porfirio Mancillas and Information Technology Principal Vince Acosta. Photos were mostly taken by AWM employees with growers' consent.**

All reported figures represent Freight on Board (F.O.B.) values for products. These are not net values and do not reflect cost of production. Total values may not add precisely due to rounding. Gross value of farm products does not reflect the total value to the economy.



**Ha Dang**  
Commissioner/Sealer of Weights & Measures

**Megan Moore**  
Assistant Agricultural Commissioner/Sealer of Weights & Measures

**Garrett Cooper**  
Deputy Director

**PEST EXCLUSION**

**Travis Elder** Deputy Ag Commissioner/Sealer  
**Claire Aicken** Supervising ASI  
**David Navarro** Supervising ASI  
**Austin Shepherd** Supervising ASI  
**Merle Van Cleve** Sr. IDS  
**Charity McGuire** Administrative Secretary II  
**Cambria Jensen** Sr. Office Assistant  
**Leslie Bernal** Office Assistant

**SR. ASI**

**Nicolas Basinski**  
**James Byers**  
**Robert Delaval**  
**Nicole Goss**  
**Saiqa Javed**  
**Jorge Olivares**  
**Gregory Terhall**

**ASI**

**Nicole Bell**  
**Brett Birdwell**  
**Kathlene Gasior**  
**Kahsai Ghebretnsea**  
**Alice Larphaveesarp**  
**Siobhan Lozada**  
**Lila Marko**  
**Evan Padgett**  
**James Riley**

**IDS II**

**Richard Arne**  
**Sierra Carr**  
**Arthur Drum**  
**Roy Joseph**  
**Keegan Smock**  
**John Utterback**

**DETECTION, DIAGNOSTICS, QUARANTINE**

**Jason Schwartze** Deputy Ag Commissioner/Sealer  
**Jasmine Lopez** Supervising ASI  
**Tracy Ellis** Agricultural Scientist  
**Patricia Nolan** Agricultural Scientist  
**Susan Callies** Office Support Specialist  
**Rosa Sotomayor** Office Assistant

**SR. ASI**

**Justin Aquino**  
**Jaime Garza**  
**Kyle Moranton**  
**Jeremy Partch**  
**William Walsh**

**ASI**

**Camthao Ho**  
**Tyler Tkachuk**

**IDS II**

**Fallon Anderson**  
**Sebastian Hampton**  
**Dusko Pantovic**  
**Fran Wade**

**DETECTOR DOGS**

**Podder**  
**Yetti**

**PEST DETECTION**

**Ryan Wann** Program Coordinator  
**Linda Feele** Sr. IDS  
**Lynne Gardner** Sr. IDS  
**Juan Zazueta** Sr. IDS  
**Ivonne Torres** Sr. IDS

**IDS II**

**Angelica Aguilar**  
**Vanessa Baltazar-Chavez**  
**Joseph Brettillo**  
**Brian Burkman**  
**Raul Burquez**  
**Manuel Casillas**  
**Marilen Cepe**  
**Louis Cheung**  
**Casey Choate**  
**De'Rein Daniel**  
**Sulay Felix**  
**Jason Feyen**  
**Jorge Fregoso**  
**Katherine French**  
**Kimberly Hock**  
**Henderson Hsu**  
**Mohamed Jama**  
**Conner Jordan**  
**Vincent Kunkel**  
**Svetoazar Lazarevic**  
**Loren Libolt**  
**Lucero Lopez**  
**Marissa Mariscal**  
**Rita McElroy**  
**Belinda Moss**  
**Chuc Nguyen**  
**Rafael Orozco**  
**Nicole Orsi**  
**John Patino**  
**John Velardi**  
**Daniel Villada**  
**Alondra Wheeler**

**JOB TITLES**

**ASI:** Agricultural/Standards Inspector  
**IDS:** Insect Detection Specialists  
**SR:** Senior



**PESTICIDE REGULATION**

**Kara Roskop-Waters** Program Coordinator  
**Tim Holbrook** Supervising ASI  
**Edith Heaton** Supervising ASI  
**Gabriel Hernandez** Supervising ASI  
**Gemma Bilog** Sr. Office Assistant  
**Sabumon Joseph** Office Assistant  
**Suzanne Raymond** Office Assistant

**SR. ASI**

**Abdel Amador**  
**Kristi Conway**  
**Daniel Desserich**  
**Chase Goodman**  
**Shady Hajjar**  
**Rocio Lara**  
**Tyler Lew**  
**Brian Pennington**  
**Benjamin Redding**  
**Nancy Wickus**

**ASI**

**Matthew Buller**  
**Eve Castillo**  
**Sean Foley**  
**Eric Gentry**  
**Timothy Hewitt**  
**Benjamin Jacobs**

**AGRICULTURAL STANDARDS**

**Dinna Morris** Deputy Ag Commissioner/Sealer  
**Bonnie Wheeler** Supervising ASI  
**Jason Sapp** Supervising ASI  
**Elinor Weed** Office Support Specialist

**SR. ASI**

**Kimberly Greene**  
**Nestor Silva**  
**Mark Lyles**  
**Monica Winters**



**ASI**

**Wesley Leonard**  
**Mario Maldonado**  
**Melissa Sinkovits**  
**Patricia Watkins**

**INTEGRATED PEST MGMT**

**Mark Martinez** Supervising Pest Mgmt. Tech.

**PEST MGMT TECHNICIAN II**

**Paul Cadena**  
**Dustin Hylton**  
**Danny Luna**  
**Ivan Robles**  
**Marcel Sanchez**  
**Raymond Wood**

**PEST MGMT TECHNICIAN I**

**Raul Macias**

**WEIGHTS AND MEASURES**

**Cynthia Davis** Supervising ASI  
**John Kinkaid** Supervising ASI  
**Claudia Verdugo** Supervising ASI  
**Mark Roughton** Sr. Office Assistant  
**Areleous Burton** Office Assistant

**SR. ASI**

**Annie Arcinue**  
**Randy Carrera**  
**Janice Deguzman**  
**Paula DeWall**  
**Katherine Dobbins**  
**Jonathan Garcia**  
**David Gonzalez Jr.**  
**Atlaw Kebede**  
**Craig Lawson**  
**Margaret Maloney**  
**Narriman McNair**  
**Quang Ong**  
**Chris Placek**  
**Kevin Porter**  
**Brad Shipley**  
**Mazen Stevens**

**ASI**

**Richard Cockroft**  
**Garrett Giles**  
**Darin Hinesly**  
**Johanna Northcote**  
**Victoria Ochoa**

**CIVIL ACTIONS/ ENVIRONMENTAL SERVICES**

**Jesus Amial Jr.** Administrative Analyst I  
**Paul Rushton** Office Support Specialist

**ADMINISTRATION**

**HR**

**Jennifer Busskohl** Sr. HR Officer  
**Belinda Rushton** HR Specialist  
**Aly Saucedo** HR Assistant

**FISCAL**

**Rolinda Gelacio** Principal Administrative Analyst  
**Aida Foronas** Sr. Accountant  
**Joe Swaykos** Administrative Analyst III  
**Melissa Balino** Administrative Analyst II  
**Fery Samani** Associate Accountant  
**Sandra Luck** Administrative Analyst I  
**Gloria Lomibao** Accounting Technician  
**Erlinda Espiritu** Purchasing Clerk  
**Cirila Pieper** Account Clerk Specialist  
**Josephine Aguinaldo** Office Support Specialist  
**Nahid Chizani** Office Support Specialist

**IT/GIS**

**Vincent Acosta** IT Principal  
**Jeffery Westrick** Sr. ASI  
**Lorie Roberts** GIS Technician

**ORA**

**Porfirio Mancillas** Operations Research Analyst







COUNTY  
OF SAN DIEGO  
DEPARTMENT OF  
AGRICULTURE,  
WEIGHTS AND  
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