

COUNTY OF SAN DIEGO

# 2019

100  
YEARS

CALIFORNIA  
DEPARTMENT  
OF FOOD AND  
AGRICULTURE

1919 - 2019

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

DEPARTMENT OF AGRICULTURE WEIGHTS AND MEASURES  
9325 HAZARD WAY, STE. 100, SAN DIEGO, CA 92123-1217  
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**MĒGAN 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 Greg Cox, Chair  
Supervisor Jim Desmond, Vice Chair  
Supervisor Dianne Jacob  
Supervisor Kristin Gaspar  
Supervisor Nathan Fletcher

I respectfully submit the Department of Agriculture, Weights and Measures' 2019 Crop Statistics and Annual Report of acreage, yield and value of agricultural production for San Diego county. In 2019, the direct economic output from agricultural production totaled \$1,795,528,573. This equates to a 1.5% increase from 2018's total value of \$1,769,815,715. The overall acreage devoted to commercial agriculture went from 242,554 acres in 2018 to 234,477 acres in 2019, for a 3.3% decrease 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, and sustainable environments/thriving. It also celebrates the California Department of Food and Agriculture's 100th anniversary as a state agency and their partnership with the County.

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 continually providing superior service to our community.

Regards,

Ha Dang  
Agricultural Commissioner/  
Sealer of Weights and Measures



# OVERVIEW OF CHANGES FROM LAST YEAR



## 2019 Overview of Changes



**The overall value of commercial agriculture in San Diego county increased 1.5% from 2018 to 2019.** This change is in large part to a 6% increase in the value of Fruit and Nut Crops grown in the county. All groups had an increase in value except for Vegetable and Vine Crops, which had a decrease compared to last year.

Ornamental Trees and Shrubs continues to be the top crop, bringing a total of \$445,488,124 or 25% of the total value of agriculture production in San Diego County. Following close behind Bedding Plants, Color, Perennials, Cacti & Succulents valued at \$399,028,516, equaling 22% of the region's overall agriculture production.

Nursery and Cut Flower Products rose by 0.1% to a value of \$1,249,388,514. Even though there were increases in Nursery and Cut Flowers, the value of Leptospermum Outdoor \$1,083,262 decreased 22% last year. Indoor Flowering & Foliage Plants value \$291,335,199 decreased 12% from the previous year. The reduction in value in some Nursery and Cut Flower Products is due to a decrease in acreage.

The value of Fruit and Nuts increased to \$341,721,924, a 6% increase from the previous year. Overall citrus value decreased by 1% from last year due in part to a 7% decrease in acreage. However, there were several Fruit and Nut crops that overall value rose greater than 20%, such as Grapes, Wine, Persimmons, and Kumquats. The rising value of these crops was due to increased yield and higher prices. Avocados were the biggest winner of this group as its value rose to \$140,116,363, a 16% from the previous year, equaling an increase of over \$19 million.

Vegetable and Vine Crop value decreased to \$130,883,159, a 0.3% decrease from last year. The decrease was due to a reduction in acreage, including Pepper acreage went down 77%. Cucumbers' and Herbs/Spices' overall value rose greater than 20%; this was due to an increase in yield and price. Vegetable prices have risen, possibly due to the demand for vegetables, and farmers are focusing more on growing specialized crops that are more valuable.

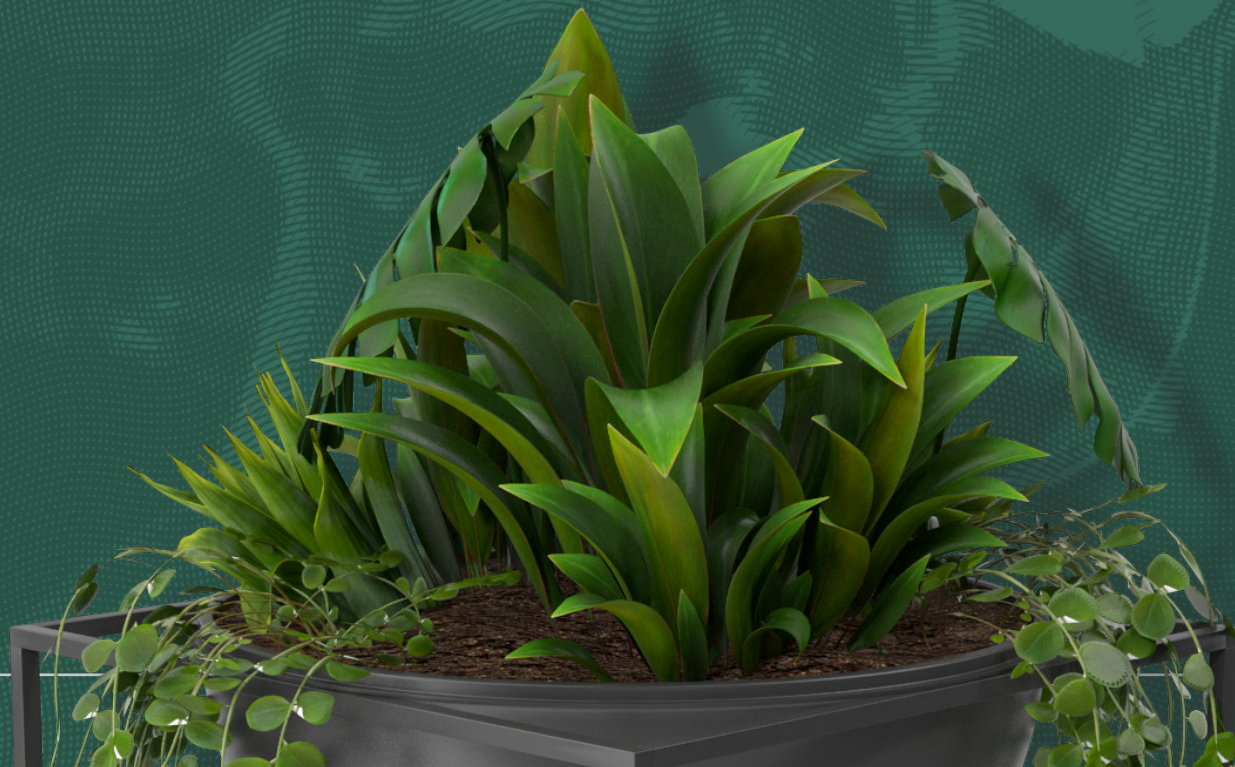
Apiary Products were valued at \$6,040,642, a 76% increase from last year. The overall value of Honey and Beeswax rose six times as compared to the previous year. The year's increase in rainfall supported the bees ability to produce more honey.

Livestock and Poultry were valued at \$59,821,120, a 0.4% increase last year. The increase was the result of adding Livestock and Poultry Products to this group, as well as, the value of Hogs and Pigs rose by 13% from the previous year.

Field Crops value rose to \$6,818,060, which is 81% higher than last year. Field, Other (such as alfalfa, clover, sugarcane) value increased to \$3,760,517 five times higher than the previous year. The value of Hay and Oats rose by 53% to \$419,963 due to the rain that occurred in the year.



# HIGHLIGHTS



## 2019 HIGHLIGHTS

<b>TOTAL VALUE OF PRODUCTION</b>	<b>\$1,795,528,573</b>
Total Acreage	234,477
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 2018	Honey & Beeswax
Greatest % Decrease in Total Dollar Value from 2018	Leptospermum Outdoor
Commodity with Greatest Amount of Planted Acreage	Avocados

## CROPS BY GROUP

CROP	TOTAL VALUE	ACRES	TOTAL VALUE
Nursery & Cut Flower Products	2019	12,101	\$1,249,388,514
	2018	12,275	\$1,247,987,124
Fruit & Nut Crops	2019	29,354	\$341,721,924
	2018	33,049	\$322,949,527
Vegetable & Vine Crops	2019	3,164	\$130,883,159
	2018	3,217	\$131,260,784
Field Crops	2019	189,858	\$6,818,060
	2018	194,013	\$3,763,857
Apiary Products	2019		\$6,040,642
	2018		\$3,437,378



### CROPS BY GROUP CONTINUED

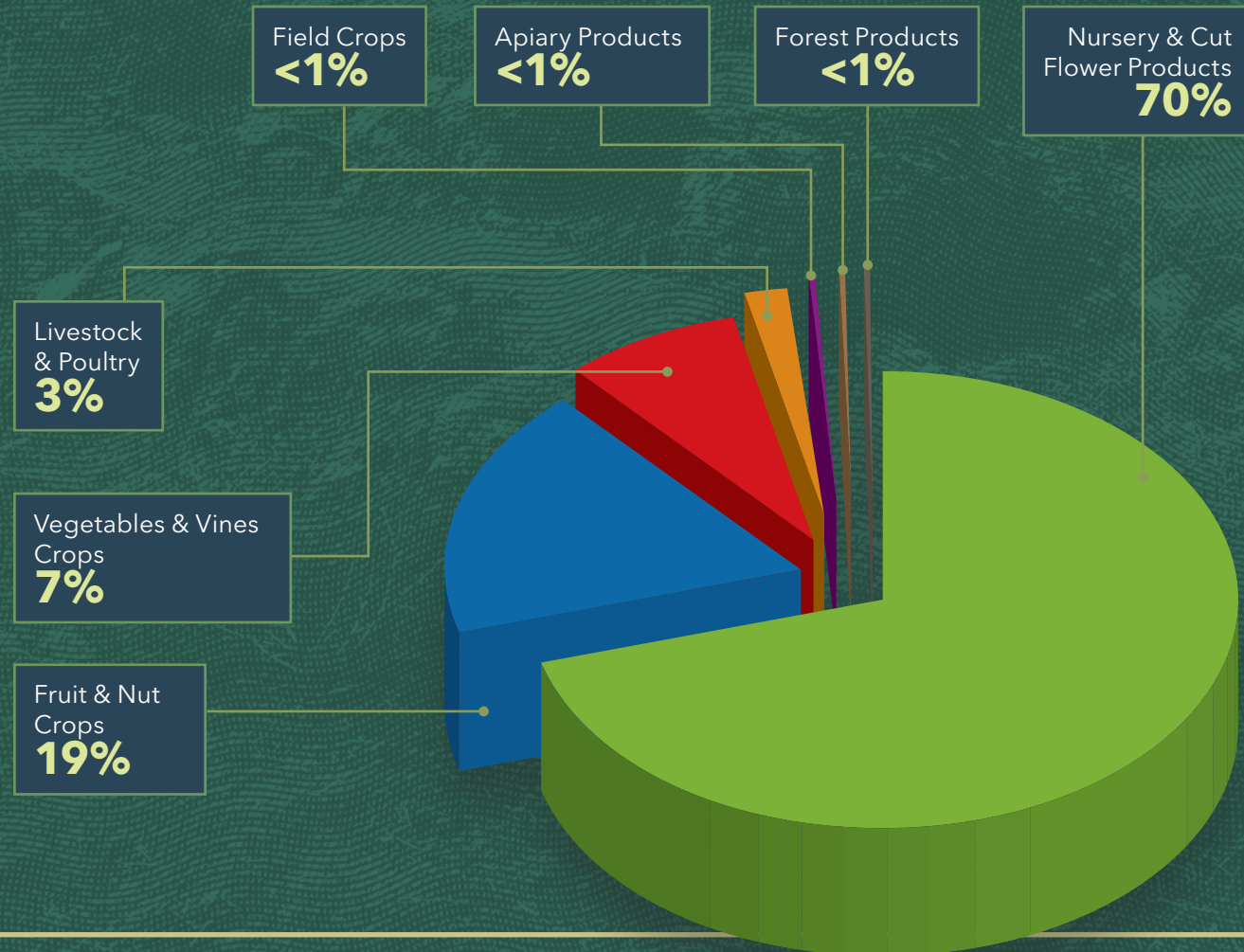
Forest Products	2019		\$855,154
	2018		\$831,974
Livestock & Poultry	2019		\$59,821,120
	2018		\$59,585,072
Totals	2019	234,477	\$1,795,528,573
	2018	242,554	\$1,769,815,715



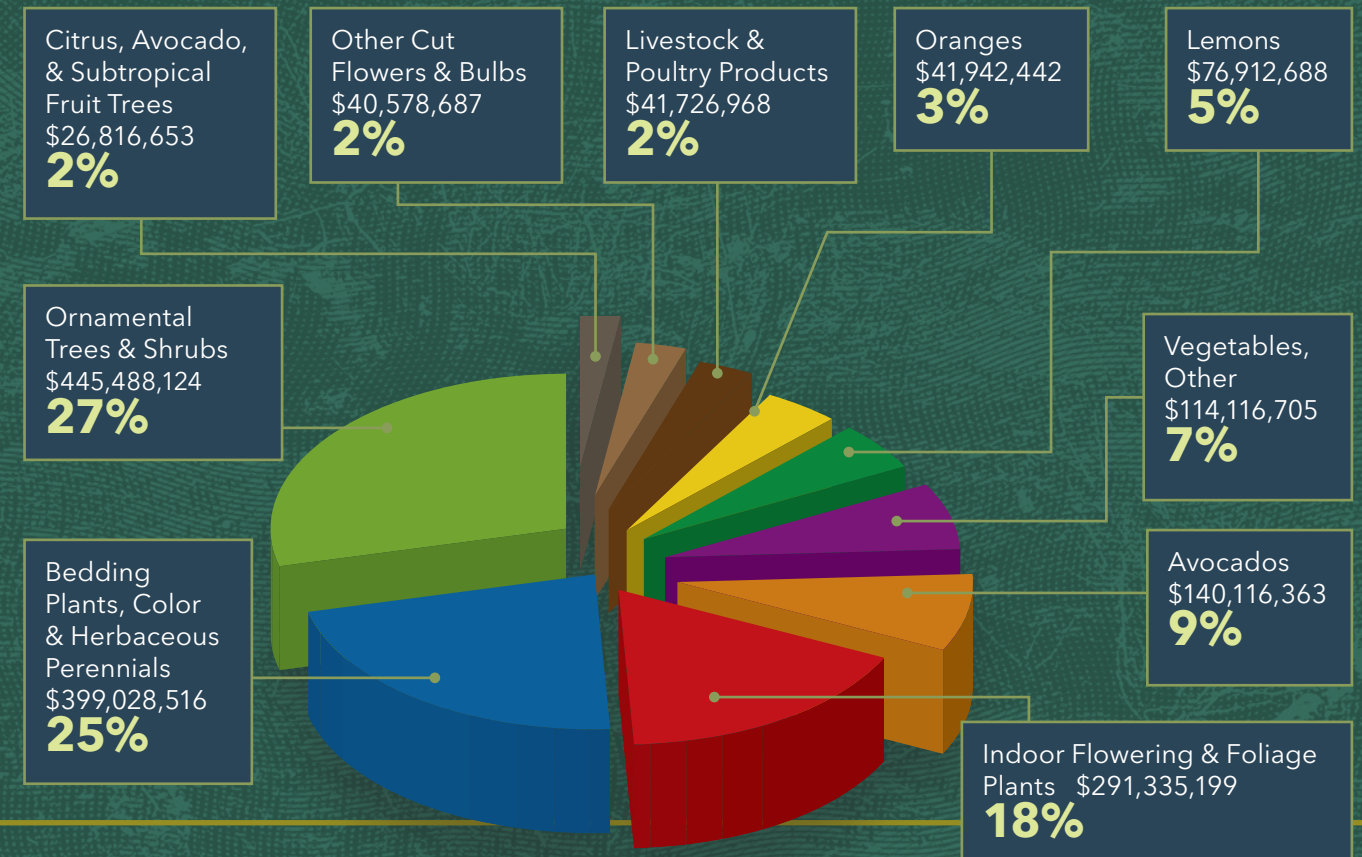
### TOP TEN CROPS

TOP TEN CROPS	GROUP	2019 VALUE
Ornamental Trees & Shrubs	Nursery & Cut Flower Products	\$445,488,124
Bedding Plants, Color & Herbaceous Perennials, Cacti & Succulents *	Nursery & Cut Flower Products	\$399,028,516
Indoor Flowering & Foliage Plants	Nursery & Cut Flower Products	\$291,335,199
Avocados	Fruit & Nut Crops	\$140,116,363
Vegetables, Other	Vegetable & Vine Crops	\$114,116,705
Lemons	Fruit & Nut Crops	\$76,912,688
Oranges	Fruit & Nut Crops	\$41,942,442
Livestock & Poultry Products	Livestock & Poultry	\$41,726,968
Other Cut Flowers & Bulbs	Nursery & Cut Flower Products	\$40,578,687
Citrus, Avocado, & Subtropical Fruit Trees	Nursery & Cut Flower Products	\$26,816,653

### CROPS BY GROUP OVERALL



### TOP 10 CROPS OVERALL





**NURSERY PRODUCTS**



CROP	YEAR	ACRES	TOTAL VALUE
Bedding Plants, Color, Perennials, Cacti & Succulents *	2019	2,138	\$399,028,516
	2018	1,969	\$363,795,226
Bedding Plants, Color, Perennials*	2019	1,160	-
	2018	1,284	\$259,749,390
Cacti & Succulents*	2019	978	-
	2018	685	\$104,045,836
Citrus, Avocado, & Subtropical Fruit Trees	2019	234	\$26,816,653
	2018	259	\$29,099,909
Indoor Flowering & Foliage Plants (including Poinsettia)	2019	849	\$291,335,199
	2018	960	\$329,527,905
Ornamental Trees & Shrubs	2019	5,002	\$445,488,124
	2018	5,052	\$442,808,436
Turf, Cut Christmas Trees & Industrial Hemp **	2019	660	\$19,363,622
	2018	610	\$14,783,291
Total Nursery Products	2019	8,883	\$1,182,032,114
	2018	8,850	\$1,180,014,768

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

\*\* Combined Industrial Hemp with Turf, Cut Christmas Trees

**CUT FLOWER PRODUCTS**

CROP	YEAR	ACRES	TOTAL VALUE
Leptospermum Outdoor	2019	301	\$1,083,262
	2018	372	\$1,394,565
Proteas Outdoor	2019	499	\$4,650,999
	2018	538	\$4,853,419
Wax Flowers Outdoor	2019	690	\$6,131,341
	2018	709	\$6,736,165
Other Cut Flowers & Bulbs	2019	1,098	\$40,578,687
	2018	1,154	\$39,126,857
Foliage	2019	630	\$14,912,111
	2018	650	\$15,861,350
Total Flower Products	2019	3,218	\$67,356,400
	2018	3,424	\$67,972,356

**NURSERY & CUT FLOWER PRODUCTS**

Total Nursery & Cut Flower Products	2019	12,101	\$1,249,388,514
	2018	12,275	\$1,247,987,124





## FRUIT AND NUT CROPS

CROP	YEAR	ACRES HARVESTED	TONS/ACRE	TONS	US \$/TON	TOTAL VALUE
Apples	2019	174	1	251	\$2,009	\$503,438
	2018	204	1	204	\$2,115	\$431,460
Total Avocados	2019	14,946	2	35,383	\$3,960	\$140,116,363
	2018	17,741	3	47,070	\$2,571	\$121,038,020
Hass	2019	14,117	2	33,934	\$3,956	\$134,255,054
	2018	16,760	3	45,309	\$2,579	\$116,866,953
Lamb	2019	619	2	1,313	\$4,174	\$5,480,624
	2018	733	2	1,495	\$2,452	\$3,665,449
Other Types	2019	210	1	136	\$2,799	\$380,684
	2018	248	1	266	\$1,901	\$505,617
Berries, Other	2019	219	8	1,833	\$10,920	\$20,016,688
	2018	257	6	1,542	\$12,000	\$18,501,120
Total Citrus	2019	10,915	14	153,666	\$978	\$150,320,118
	2018	11,701	13	148,946	\$1,019	\$151,713,209
Grapefruit	2019	1,319	18	23,742	\$654	\$15,517,771
	2018	1,450	17	24,653	\$760	\$18,735,938
Kumquats	2019	54	4	216	\$3,431	\$741,096
	2018	54	3	162	\$3,650	\$591,300
Lemons	2019	3,351	18	58,978	\$1,304	\$76,912,688
	2018	3,175	16	50,800	\$1,380	\$70,103,338

## FRUIT AND NUT CROPS

CROP	YEAR	ACRES HARVESTED	TONS/ACRE	TONS	US \$/TON	TOTAL VALUE
Limes	2019	190	6	1,102	\$1,902	\$2,096,004
	2018	213	6	1,275	\$1,870	\$2,384,699
Oranges	2019	5,179	11	59,041	\$710	\$41,942,442
	2018	5,819	10	58,194	\$740	\$43,063,782
Tangerines, Tangelos	2019	822	13	10,587	\$1,238	\$13,110,116
	2018	990	14	13,863	\$1,214	\$16,834,153
Grapes, Wine	2019	1,511	2	3,596	\$1,552	\$5,580,300
	2018	1,642	2	3,284	\$1,398	\$4,591,032
Fruit & Nuts, Other	2019	1,242				\$10,191,569
	2018	1,090				\$8,785,836
Persimmons	2019	162	5	826	\$2,058	\$1,700,320
	2018	162	4	648	\$2,100	\$1,360,800
Strawberries	2019	185	29	5,393	\$2,465	\$13,293,129
	2018	252	27	6,678	\$2,475	\$16,528,050
Total Fruit & Nut Crops	2019	29,354				\$341,721,924
	2018	33,049				\$322,949,527



## VEGETABLE AND VINE CROPS

CROP	YEAR	ACRES HARVESTED	TONS /ACRE	TONS	US \$ /TON	TOTAL VALUE
Cucumbers	2019	62	10	620	\$1,529	\$947,856
	2018	61	10	610	\$1,274	\$777,219
Herbs/Spices	2019	164	10	1,640	\$6,372	\$10,450,080
	2018	148	10	1,482	\$5,400	\$8,003,880
Peppers *	2019	30	-	-	-	-
	2018	130	14	1,872	\$1,329	\$2,487,888
Squash	2019	381	9	3,581	\$1,499	\$5,368,519
	2018	373	8	2,987	\$1,530	\$4,570,661
Tomatoes *	2019	1,154	-	-	-	-
	2018	1,227	16	19,632	\$3,107	\$60,996,624
Vegetables, Other *	2019	2,557				\$114,116,705
	2018	1,277				\$54,424,512
Total Vegetable & Vine Crops	2019	3,164				\$130,883,159
	2018	3,217				\$131,260,784

\* Combined Peppers and Tomatoes with Vegetables, Other



## LIVESTOCK AND POULTRY

COMMODITY	YEAR	NUMBER OF HEAD	WEIGHT CWT	US \$/ CWT	TOTAL VALUE
Cattle & Calves	2019	13,200	118,800	\$109	\$12,949,200
	2018	10,900	98,100	\$137	\$13,407,327
Hogs & Pigs	2019	1,558	3,896	\$58	\$225,939
	2018	1,382	3,455	\$58	\$200,390
Chickens	2019		63,195	\$76	\$4,812,453
	2018		65,149	\$77	\$5,045,034
Lambs & Sheep	2019	960	960	\$111	\$106,560
	2018	962	962	\$111	\$106,782
Livestock & Poultry Products *	2019				\$41,726,968
	2018				\$40,825,539
Total Livestock & Poultry	2019				\$59,821,120
	2018				\$59,585,072

\*Combined Milk and Eggs, Chicken Market with Livestock & Poultry Products

## FOREST PRODUCTS

COMMODITY	YEAR	TOTAL VALUE
Timber	2019	\$14,434
	2018	\$15,740
Firewood	2019	\$840,720
	2018	\$816,233
Total Forest Products	2019	\$855,154
	2018	\$831,974





### FIELD CROPS

COMMODITY	YEAR	ACRES	TONS/ACRE	TONS	US\$/TON	TOTAL VALUE
Hay & Oats	2019	1,874	2	3,748	\$112	\$419,963
	2018	2,035	1	2,035	\$135	\$274,725
Pasture, Irrigated	2019	719				\$1,432,949
	2018	749				\$1,449,180
Range	2019	185,328				\$1,204,631
	2018	189,110				\$1,245,327
Field, Other*	2019	1,937				\$3,760,517
	2018	2,119				\$794,625
Total Field Crops	2019	189,858				\$6,818,060
	2018	194,013				\$3,763,857

\*Combined Industrial Hemp with Field, Other



### APIARY PRODUCTS

COMMODITY	YEAR	TOTAL VALUE
Honey & Bees Wax *	2019	\$2,540,332
	2018	\$433,183
Pollination	2019	\$3,500,310
	2018	\$3,004,195
Total Apiary Products	2019	\$6,040,642
	2018	\$3,437,378

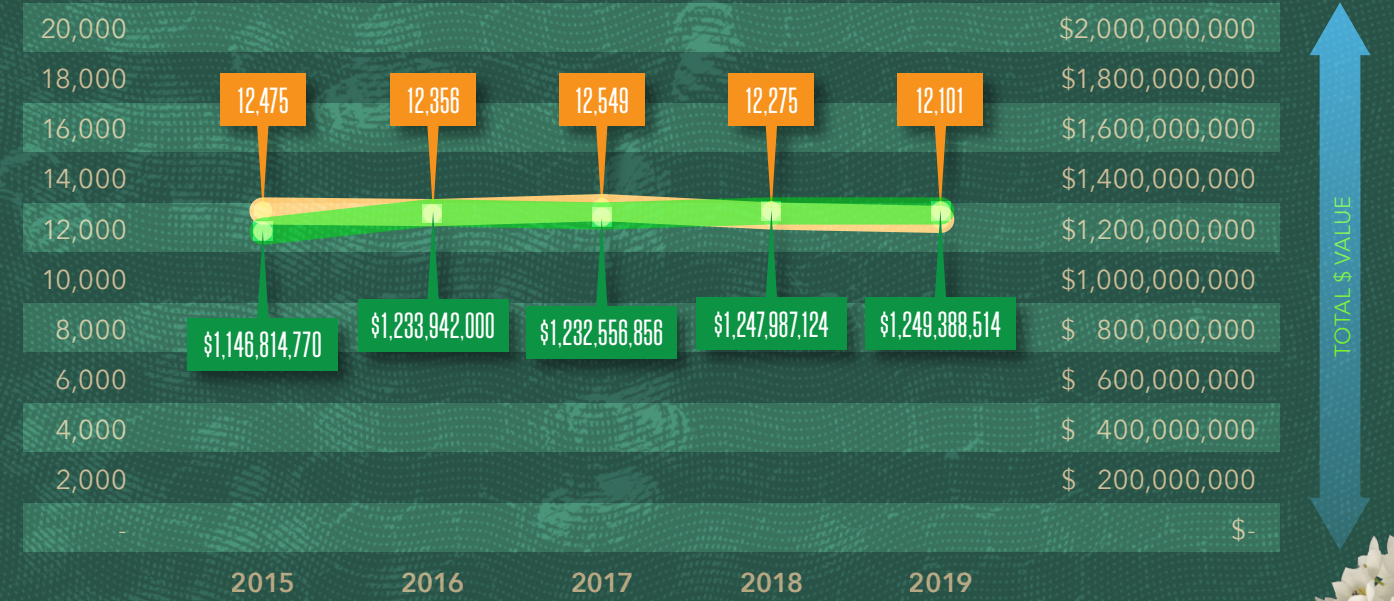
\*Combined Bees Wax with Honey



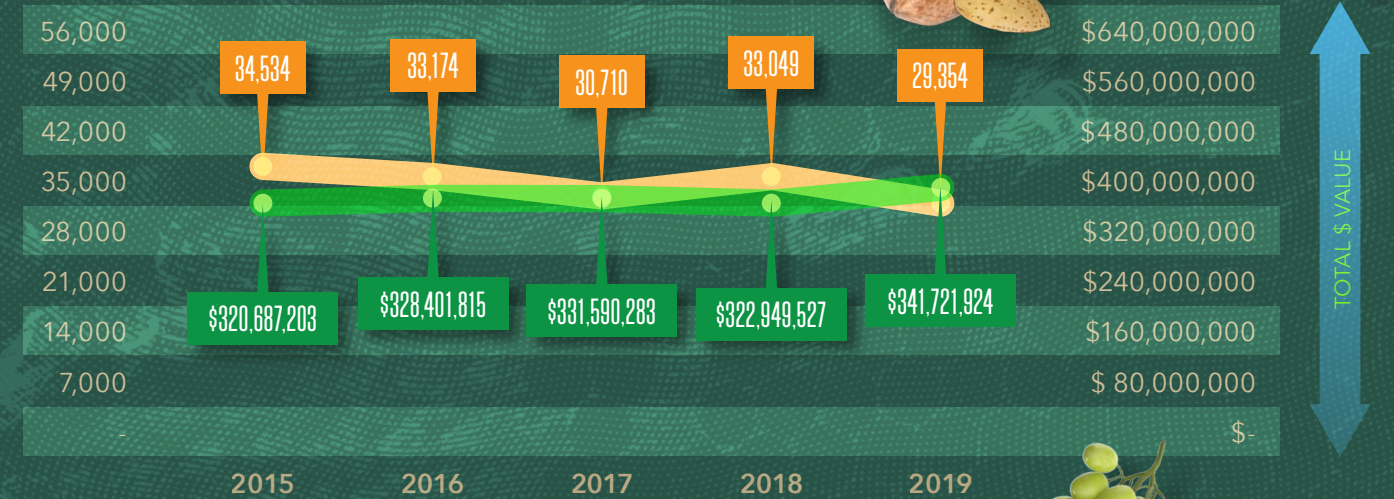
# FIVE YEAR TREND ANALYSIS

TOTAL ACRES  
TOTAL \$ VALUE

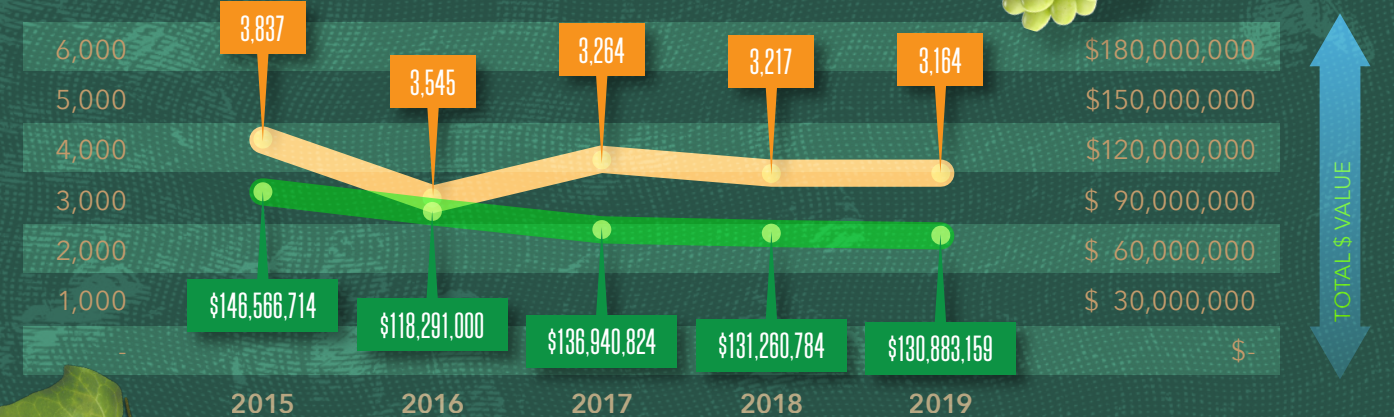
### NURSERY & CUT FLOWER PRODUCTS



### FRUIT & NUT CROPS



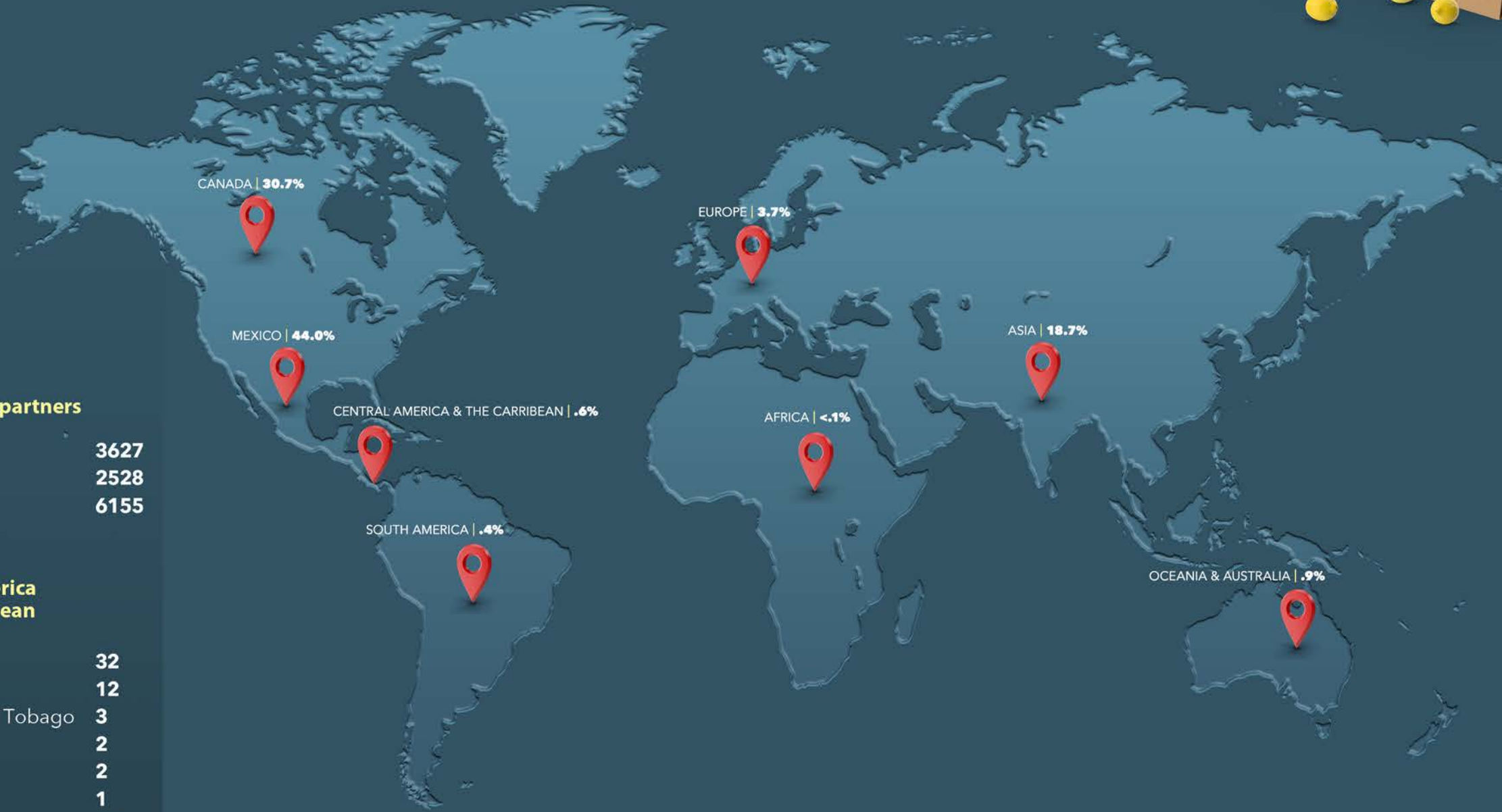
### VEGETABLES & VINE CROPS





# INTERNATIONAL TRADING PARTNERS

IN 2019 WE CERTIFIED 8,245 SHIPMENTS OF PLANT MATERIAL (INCLUDING FRUITS AND VEGETABLES) GOING TO 35 COUNTRIES



### Top trading partners

Mexico	3627
Canada	2528
Total	6155

### Central America & the Caribbean

Costa Rica	32
Nicaragua	12
Trinidad and Tobago	3
El Salvador	2
Guatemala	2
Ecuador	1
Total	52

### South America

Chile	22
Ecuador	5
Colombia	5
Total	32

### Domestic Trading



Top locally grown commodities certified for export within the United States:



Label: **Cacti & Succulents**  
Certificates: **948**

Label: **Ornamental Trees & Shrubs**  
Certificates: **295**



Label: **Indoor Flowering & Foliage Plants**  
Certificates: **227**



### Europe

United Kingdom	144
Germany	125
Spain	25
France	4
Netherlands	4
Belgium	3
Italy	2
Total	307

### Africa

South Africa	81
Total	81

### Asia

Japan	914
Korea, Republic of	216
Taiwan	132
Singapore	106
Hong Kong	80
Philippines	31
Thailand	28
Macao	16
China	10
Vietnam	3
Israel	2
Malaysia	1
Qatar	1
Total	1540

### Oceania & Australia

New Zealand	32
Australia	29
French Polynesia	17
Total	78



# SUSTAINABLE AGRICULTURE



ustainable agriculture promotes the economic viability of agriculture while preserving natural resources and the environment. Pest prevention activities are essential to

inhibiting the spread of exotic pests and ensuring a sustainable agricultural industry in California.

The Department of Agriculture, Weights and Measures administers programs for the detection, control and eradication of insect pests, plant diseases and invasive weeds, as well as for the enforcement of quarantines to prevent the spread of invasive pests.

Pest ratings are intended as aids to inform county agricultural commissioners and other interested persons as to a particular pest's environmental, agricultural, and biological significance, as well as its importance to the general public, and what action must be taken to deal with these pests as recommended by the California Department of Food.

Below is a list of pest rating definitions the department follows by CDFA's classification:

**A-rated:** A pest or disease that is known to have a detrimental impact on agriculture 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 but is established in some areas in California.

**C-rated:** An organism not subject to enforced action except to slow the spread. These organisms are widespread throughout the state.

**Q-rated:** An organism requiring a temporary "A" rating pending the determination of a permanent rating. These organisms are usually new to California or their impacts are unknown.

The infographics on the following two pages show the work the department's programs have performed to support sustainable agriculture in San Diego.



# SUSTAINABLE AGRICULTURE

## HIGH RISK PEST EXCLUSION

**6,014**

Incoming plant shipment inspections

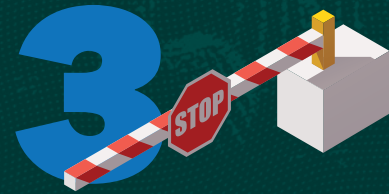


**152**

Notices of rejection



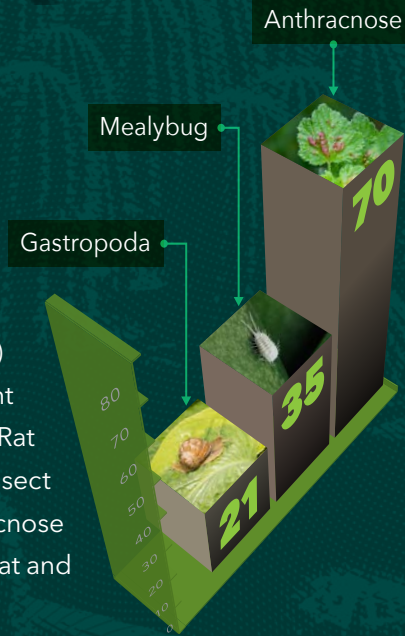
**147 Actionable Pest Finds**



**3** # of international border operations conducted with Homeland Security, Customs and Border Protection and U.S. Department of Agriculture

### INTERCEPTED

AWM inspectors intercepted and remedied a total of 21 snail and slug (Gastropoda) infestations on incoming shipments of nursery stock. Snail and slugs are important agricultural and environmental pests that can also carry human diseases such as Rat Lung Worm. AWM also intercepted and remedied a total of 35 scale and mealybug insect infestations (Families Coccidae, Diaspididae, and Pseudococcidae) and 70 anthracnose fungal infestations (Colletotrichum sp.). Both are known to be particularly hard to treat and damaging to horticultural products.



## DETECTOR DOG TEAMS

**6,630**

# of FedEx, UPS and Ontrac packages alerted on by detector dogs



**72** # of pests found (12 A rated, 8 B rated, and 52 Q rated)

**304 Notices of Rejection**

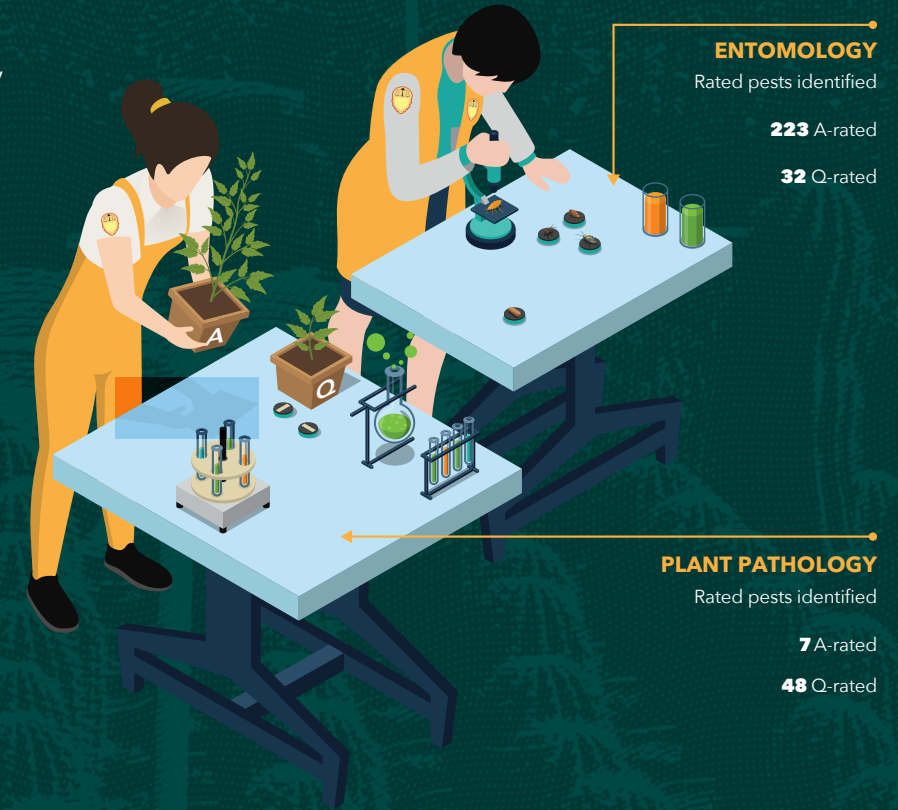
Issued for packages in violation of State Pest Exclusion laws



# SUSTAINABLE AGRICULTURE

## LABS

Our Entomology and Plant Pathology Labs rapidly identify insect and plant diseases that require our attention. Some have a known economic importance (A-rated) and others are suspected of economic importance (Q-rated).



### ENTOMOLOGY

Rated pests identified

**223** A-rated

**32** Q-rated

### PLANT PATHOLOGY

Rated pests identified

**7** A-rated

**48** Q-rated

## INTEGRATED PEST CONTROL

The Integrated Pest Control Program (IPC) protects the county's agriculture, sensitive habitats, native wildlife, 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>82.65</b></p> 	<p>Weed Species: <b>Spotted knapweed, Centaurea maculosa</b></p> <p>Rating: <b>A</b></p> <p>Acreage Survey /Treated: <b>13.3</b></p> 	<p>Weed Species: <b>Ward's weed, Carrichtera annua</b></p> <p>Rating: <b>A</b></p> <p>Acreage Survey /Treated: <b>45</b></p> 	<p>Weed Species: <b>Artichoke thistle, Cynara cardunculus</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey /Treated: <b>37.5</b></p> 	<p>Weed Species: <b>Barbed Goatgrass, Aegilops triuncialis</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey /Treated: <b>7.3</b></p> 	<p>Weed Species: <b>Bridal broom, Retama monosperma</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey /Treated: <b>4.2</b></p> 	<p>Weed Species: <b>Canary Island St. John's wort, Hypericum canariense</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey /Treated: <b>48.7</b></p> 
<p>Weed Species: <b>Carnation Spurge, Euphorbia terracina</b></p> <p>Rating: <b>B</b></p> <p>Acreage Survey /Treated: <b>13.6</b></p> 	<p>Weed Species: <b>Yellow starthistle, Centaurea solstitialis</b></p> <p>Rating: <b>C</b></p> <p>Acreage Survey /Treated: <b>18.9</b></p> 	<p>Weed Species: <b>French Broom, Genista monspessulana</b></p> <p>Rating: <b>C</b></p> <p>Acreage Survey /Treated: <b>8.5</b></p> 	<p>Weed Species: <b>Algerian sea lavender, Limonium ramosissimum</b></p> <p>Rating: <b>Invasive</b></p> <p>Acreage Survey /Treated: <b>7.7</b></p> 	<p>Weed Species: <b>Eupatory, Ageratina adenophora</b></p> <p>Rating: <b>Invasive</b></p> <p>Acreage Survey /Treated: <b>2.9</b></p> 	<p>Weed Species: <b>European sea lavender, Limonium duriusculum</b></p> <p>Rating: <b>Invasive</b></p> <p>Acreage Survey /Treated: <b>1.6</b></p> 	<p><b>Total Acreage Survey/Treated</b></p> <p><b>291.85</b></p>



# CELEBRATING 100 YEARS OF COLLABORATION



While the official start of CDFA was 1919, measures to protect agriculture began even earlier. For example, in 1878, the legislature passed a law to prohibit the labeling of oleomargarine as butter. Today, AWM's Direct Marketing and Organics

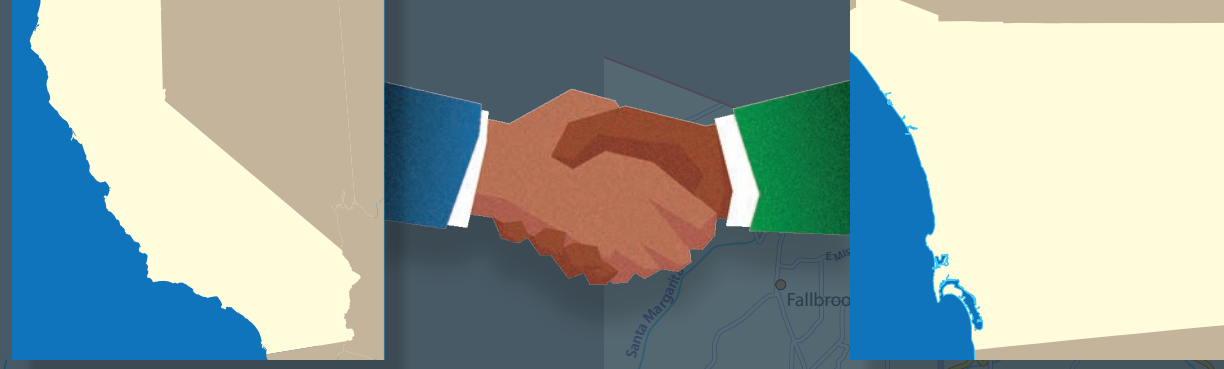
programs continue to support CDFA's goal of a fair marketplace. Inspectors visit certified farmers' markets to verify certified producers only sell the crops they grow. They also visit farmers to ensure they only use authorized pesticides. As a result of these inspections, consumers can be confident that agricultural products

2019 MARKED THE CENTENNIAL ANNIVERSARY OF THE ESTABLISHMENT OF THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE (CDFA) BY THE CALIFORNIA STATE LEGISLATURE. DURING ITS 100-YEAR HISTORY, CDFA HAS BEEN RESPONSIBLE FOR ENSURING THE PROTECTION OF THE STATE'S AGRICULTURE FROM INVASIVE PEST SPECIES AND PROMOTING THE CALIFORNIA AGRICULTURAL INDUSTRY. 1919 SAW THE OFFICIAL START OF WHAT WOULD BECOME A COLLABORATIVE RELATIONSHIP BETWEEN CDFA AND THE COUNTY DEPARTMENT OF AGRICULTURE, WEIGHTS AND MEASURES (AWM).

purchased at a certified farmers' market are locally grown in California and labeled organic products are organic. In 1880, the legislature appointed a seven-member State Board of Viticulture to protect grapevines from the disease phylloxera root rot. This effort continues today with six counties, including San

Diego County, prohibiting the noncertified movement of vines or grape-harvesting equipment from areas known to have root rot. In addition, AWM's export program provides inspections and certifications exporters need to ship their products to other counties, states, and countries.





CALIFORNIA

SAN DIEGO COUNTY

**CDFA**

**AWM**

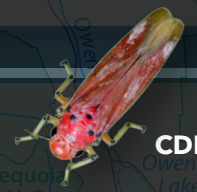
**100 YEARS**  
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE  
**1919-2019**



**CDFA's Division**

**Detection, Diagnostics, Quarantine**

- Citrus Pest and Disease Prevention Division → Citrus Quarantine Program
- Plant Health and Pest Prevention Services Division → Honey Bee Protection Program
- Plant Health and Pest Prevention Services Division → Pest Detection
- Plant Health and Pest Prevention Services Division → Dog Team
- Plant Health and Pest Prevention Services Division → Seed Law
- Plant Health and Pest Prevention Services Division → Entomology and Plant Pathology



**CDFA's Division**

**Pest Exclusion**

- Plant Health and Pest Prevention Services Division → High Risk Pest Exclusion
- Pierce's Disease Control Program → Pierce's Disease Control Program
- Plant Health and Pest Prevention Services Division → Export Certification
- Plant Health and Pest Prevention Services Division → Nursery Inspection



**CDFA's Division**

**Agricultural Standards/Integrated Pest Control**

- Inspection Services → Direct Marketing
- Inspection Services → Organic program
- Plant Health and Pest Prevention Services Division → Integrated Pest Control Program
- Plant Health and Pest Prevention Services Division → Industrial Hemp Cultivation
- Inspection Services → Fruit & Nuts Standardization



In 1899, California began its long relationship with invasive fruit flies by pioneering an effort to keep the Mexican fruit fly out of the United States. AWM, in partnership with CDFA's Division of Plant Health and Pest Prevention Services, still battles fruit flies as well as many other pests as they carry out their shared mission to protect California's food supply and the environment by trapping pests in urban and suburban areas.

In support of this mission, California established its first agricultural inspection stations in the early 1920s, which continue today. At these border inspection stations, vehicles and commodities are checked to ensure they are pest free and meet all regulatory requirements. Today AWM's High-Risk Pest Exclusion and Detector Dog Team programs support the 16 CDFA border inspection stations in their mission to keep California free from invasive plant pests. The High-Risk Pest Exclusion program conducts detailed inspections of commercial nursery products imported to San Diego County to ensure they are free of invasive insects and diseases. Our two detector dog teams, which consist of a specially trained agricultural-sniffing dog and

dog handler, visit post offices and other parcel carriers to ensure that mail packages coming into San Diego County do not carry unwanted hitchhikers on plants, fruits, or vegetables sent to family, friends, and customers. AWM's local inspection programs reinforce the mission that starts at each CDFA border station by inspecting 100% of high-risk incoming commercial plant shipments for invasive agricultural pests.

Our ongoing partnership benefits all county residents as well as the agricultural industry as we strive to protect consumer confidence; maintain a fair marketplace; promote the ability of business to sell goods in other parts of the state, country, and world; and protect against the establishment of invasive agricultural pests. These are just a few of the programs in which CDFA and AWM collaborate to protect agriculture in San Diego and California. To learn more, visit CDFA at [cdfa.ca.gov](http://cdfa.ca.gov) and AWM at [sandiegocounty.gov/awm](http://sandiegocounty.gov/awm).

AWM congratulates CDFA on its 100th anniversary and looks forward to protecting and promoting agriculture together for the next 100 years.



# PROGRAMS AND SERVICES



**est 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.

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6,014 incoming plant shipments inspected with 147 actionable pest finds

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360 nurseries, comprising 5,784 acres, inspected for pests and diseases

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161,330 glassy-winged sharpshooter traps were inspected in nurseries

**Our Detector Dog Team Program** supports the statewide pest prevention network via parcel shipments by using agriculture detector dogs at parcel facilities.

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430 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. Our Pest Detection Program performed 196,561 insect trap inspections throughout the county. The traps are used to detect insect pests, such as exotic 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 Pest Detection 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 and technically impossible to control.





**Our Citrus Quarantine Program** is tasked with ensuring that the citrus industry is in compliance with state regulations and quarantines regarding the insect Asian citrus psyllid (ACP). 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 prevent the spread of HLB into the county. HLB was not found in San Diego county.

Performed 140 grower inspections

Performed 157 transporter inspections

Performed 139 packinghouse inspections

Performed 10 fruit seller inspections

Issued 153 compliance agreements

**Our 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 and animal health, as well as the environment.



Conducted 1,503 inspections

Conducted 92 hazardous materials inventory investigations

Completed 53 pesticide/antimicrobial investigations

Investigated 55 complaints

Issued 155 restricted materials permits

Conducted 35 outreach events reaching over 2,100 people

Participated in 13 stakeholder meetings

Issued 17 Cease and Desist Orders

Took 53 enforcement actions

**Our Agricultural Standards Division** 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, conducting citrus maturity testing, and testing organic produce for pesticide residue.

Issued certificates to 35 farmers' markets and 203 certified growers in San Diego county

Conducted 160 fruit and vegetable standardization inspections

Registered 369 organic growers in San Diego county





**Our 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 are aimed at stopping the potential for discharging pollutants such as fertilizers, pesticides, and sediment into local waterways.

Completed 145 inspections

Investigated 80 complaints

**Our Entomology and Plant Pathology Labs** provide rapid insect and plant disease identification allowing a quick response in the fight against pests.

Entomology lab performed 8,373 determinations

Plant Pathology lab performed 1,589 determinations

**Our 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 283 Beekeepers, totaling 30,712 managed honey bee colonies in 672 apiary locations

**Our Integrated Pest Control Program** works under the Board of Supervisors' policy mandating the use of Integrated Pest Management (IPM), 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 safety

pull-over areas visible and easy to access.

Treated with herbicides or manually removed 3,531 acres of weeds

Treated for structural pests at 187 county facilities

**Our Civil Actions Program** supports the department's civil penalty process in an effort to gain regulatory compliance.

As a result of violations, regulatory programs throughout the department conducted 312 civil penalty actions listed below, which resulted in five hearings:

252 for weights & measures

16 for structural pesticide

7 for agricultural standards

37 for agricultural pesticide use

**Our 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 55,383 commercial weighing and measuring devices with a 93.3% compliance rate

Investigated 266 consumer complaints regarding commercial meters and scales, petroleum, package/labeling, and price overcharges

Inspected 1,752 retail locations for price accuracy with 24,821 items scanned

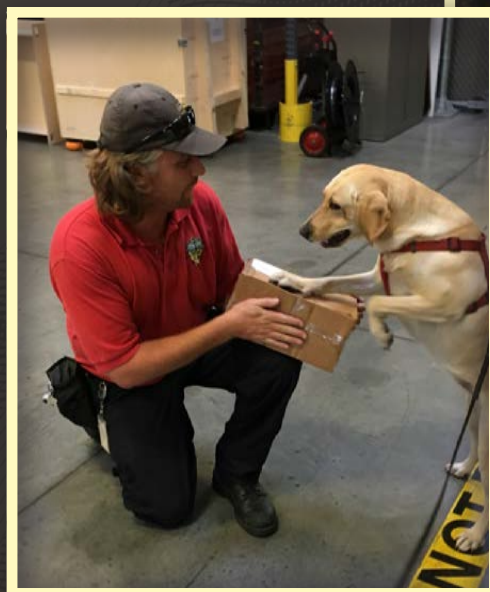
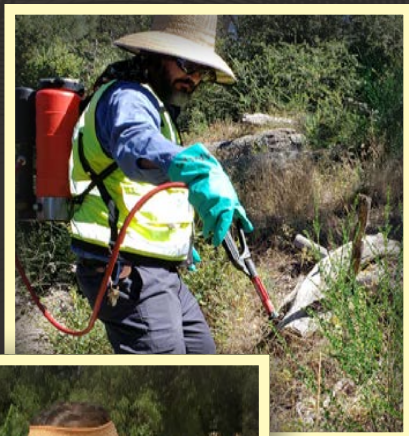
Program	Services	How to Reach Staff
Agricultural Hazardous Materials Inventory	Inspections and registrations of agricultural hazardous materials; and California Environmental Reporting System help	858-694-8980 FAX: 858-467-9277
Agricultural Standards	Certified farmers' markets and certified producer certificates; organic handler/producer; fruit and vegetable standardization; industrial hemp cultivation; agricultural stormwater	858-614-7786 FAX: 858-467-9273
Citrus Quarantine	Inspections of Asian citrus psyllid quarantine requirements	858-614-7770 FAX: 858-467-9697
Detector Dog Teams	Parcel inspections	858-614-7770 FAX: 858-467-9697
Entomology	Inspections of identification; pest surveys	858-614-7738 FAX: 858-467-9697
Honey Bee Protection	Apiary registration, hive inspections, honey bee education, and outreach	858-614-7738 FAX: 858-467-9697
Integrated Pest Control	Invasive/Noxious Weed Control Information	858-614-7750 FAX: 858-467-9279
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	760-752-4700 Inspection Request Line: 760-752-4713 FAX: 760-724-4098
Pest Detection	Invasive insect trapping, such as exotic fruit flies, Gypsy moth, and Japanese beetle	858-614-7770 800-300-TRAP(8727) FAX: 858-467-9697
Pesticide Regulation	Pest control business registration; operator identification numbers; pesticide use reporting; restricted materials permits; employee pesticide training; pesticide complaints	858-694-8980 FAX: 858-467-9277
Plant Pathology/ Nematology	Plant disease diagnostic services; plant disease surveys	858-614-7734 FAX: 858-467-9697
Weights and Measures	Price Verification (scanners) and commercial weighing and measuring device registration; weighmaster; petroleum quality/labeling; package and labeling inspections	858-694-2778 FAX: 858-467-9278 Meter Testing Lab Hours: 8:00am-5:00pm M-F
AWM	All Services	www.sdcawm.org sdcawm@sdcounty.ca.gov

**The 2019 Crop Statistics and Annual Report was produced by Operations Research Analyst, Porfirio Mancillas and Information Technology Principal, Vince Acosta.**

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.



# STAFF



**Ha Dang**  
Agricultural Commissioner/Sealer of Weights and Measures

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

**Robert Roma**  
Deputy Director

## ADMINISTRATION

### HR

**Jennifer Busskohl** Sr. HR Officer  
**Belinda Rushton** HR Specialist  
**Giavanna Berk** HR Assistant

### FISCAL

**Rolinda Gelacio** Principal Administrative Analyst  
**Aida Foronas** Sr. Accountant  
**Melissa Balino** Administrative Analyst III  
**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

### ORA

**Porfirio Mancillas** Operations Research Analyst

### IT/GIS

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

## AGRICULTURAL STANDARDS

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

### SR. ASI

**Mark Lyles**  
**Kimberly Greene**  
**Monica Winters**

### ASI

**Nestor Silva**  
**Patricia Watkins**  
**Melissa Sinkovits**

### INTEGRATED PEST MGMT

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

### PEST MGMT TECHNICIAN II

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

### PEST MGMT TECHNICIAN I

**Raul Macias**

## DETECTION, DIAGNOSTICS, QUARANTINE

**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

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

### IDS II

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

### DETECTOR DOG

**Podder**  
**Yetti**

### PEST DETECTION

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

### IDS II

**Vanessa Baltazar-Chavez**  
**Joseph Brettillo**  
**Matthew Buller**  
**Brian Burkman**  
**Raul Burquez**  
**Manuel Casillas**  
**Marilen Cepe**  
**Louis Cheung**  
**Casey Choate**  
**De'Rein Daniel**  
**Sulay Felix**  
**Jorge Fregoso**  
**Valerie Galarze**  
**Kimberly Hock**  
**Mohamed Jama**  
**Roy Joseph**  
**Vincent Kunkel**  
**Svetozar Lazarevic**  
**Lucero Lopez**  
**Marissa Mariscal**  
**Rita McElroy**  
**Belinda Moss**  
**Rafael Orozco**



John Patino  
Keegan Smock  
Wiam Toma  
John Velardi  
Daniel Villada  
Alondra Wheeler

## WEIGHTS AND MEASURES

**Garrett Cooper** Deputy Ag Commissioner/Sealer  
**John Kinkaid** Supervising ASI  
**Claudia Verdugo** Supervising ASI  
**Andrei Brezoica** 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  
Ian Hudson  
Atlaw Kebede  
William Lawson  
Margaret Maloney  
Narriman McNair  
Quang Ong  
Christopher Placek  
Kevin Porter  
Bradley Shipley  
Mazen Stevens

## ASI

Richard Cockroft  
Garrett Giles  
Darin Hinesly  
Johanna Northcote  
Victoria Ochoa

## CIVIL ACTIONS

**Cynthia Davis** Program Coordinator  
**Jennifer Alipio** Administrative Analyst II  
**Jesus Amial Jr.** Administrative Analyst I  
**Paul Rushton** Office Support Specialist



## 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  
Colleen Carr  
Kristi Conway  
Daniel Desserich  
Chase Goodman  
Shady Hajjar  
Rocio Lara  
Tyler Lew  
Benjamin Redding  
Nancy Wickus

## ASI

Eve Castillo  
Sean Foley  
Valeria Garcia  
Timothy Hewitt  
Benjamin Jacobs  
Brian Pennington  
Joseph Sullivant

## 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

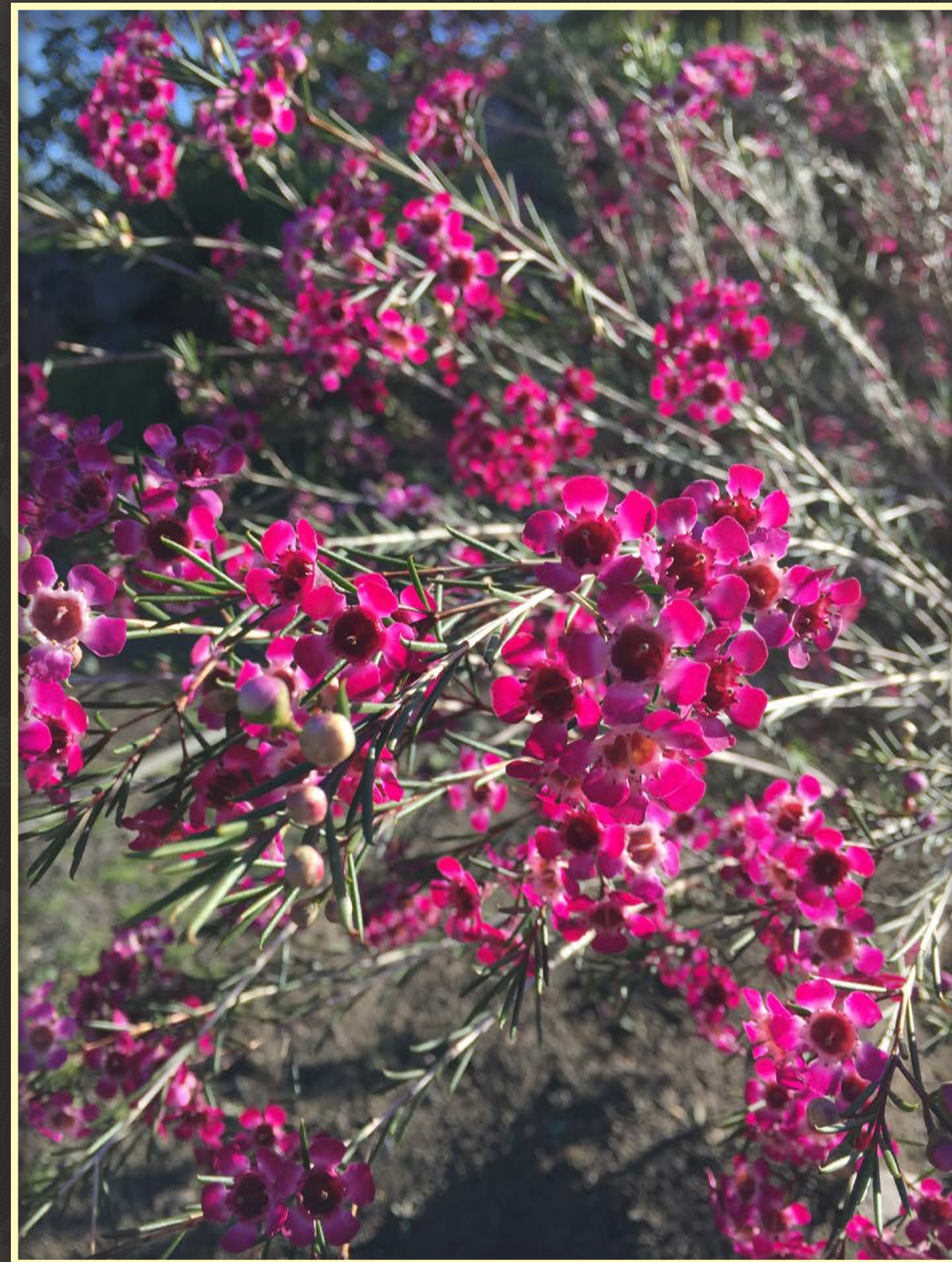
Nicole Bell  
Brett Birdwell  
Candice Evans  
Kathlene Gasior  
Kahsai Ghebretseha  
Alice Larpthaveesarp  
Siobhan Lozada  
Lila Marko  
Evan Padgett  
James Riley  
Joseph Wilson

## IDS II

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Arthur Drum  
Eric Gentry  
Loren Libolt  
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AWM ASI and IDS







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