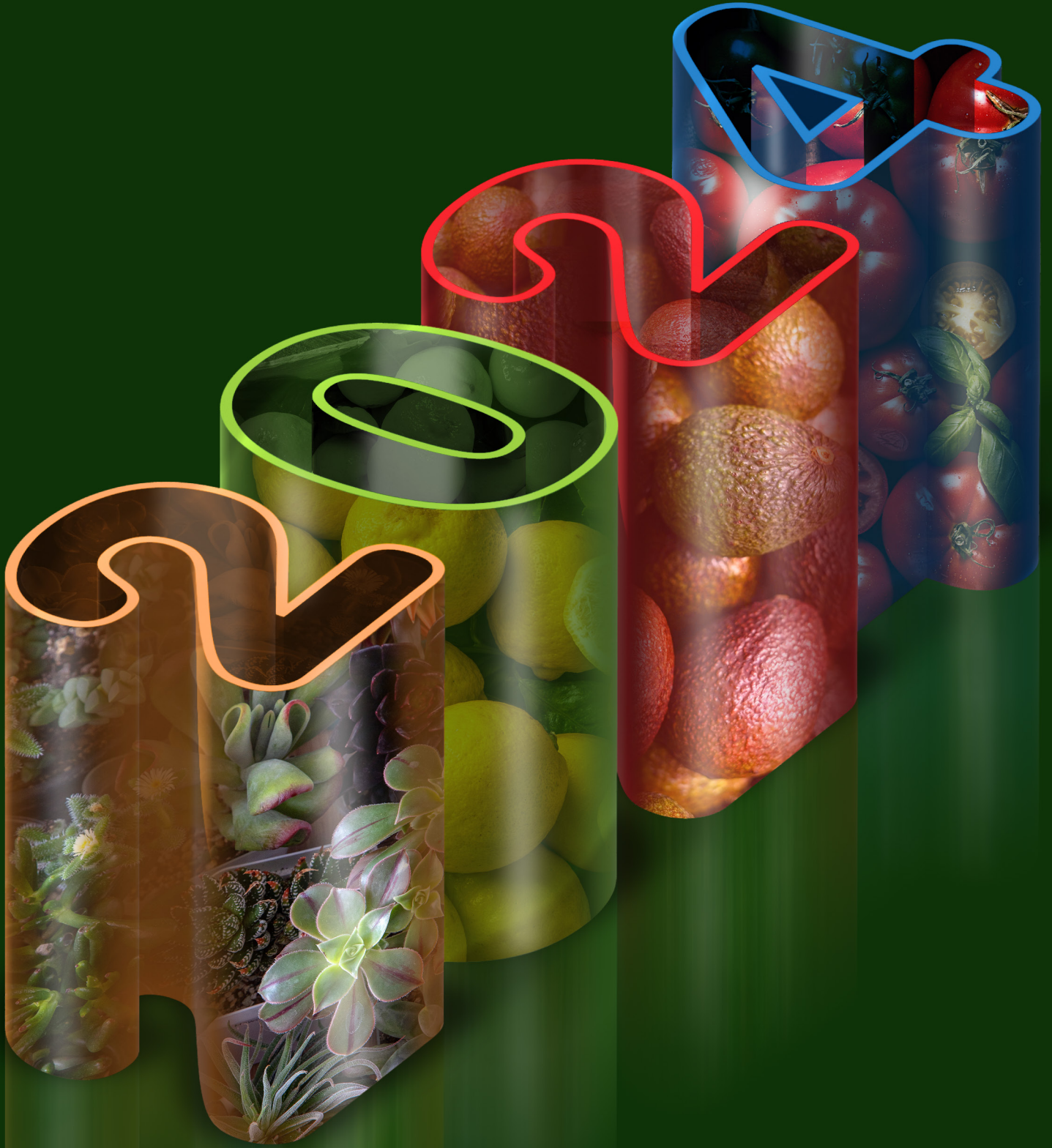


C O U N T Y O F S A N D I E G O



C R O P S T A T I S T I C S
& A N N U A L R E P O R T



Message from the Agricultural Commissioner



Overview of Changes from Last Year



Highlights



Sustainable Agriculture



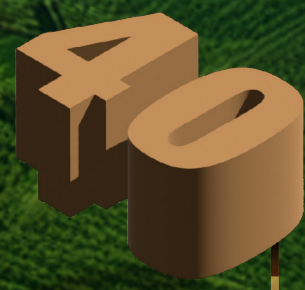
Farming for the Future: Building Resilience in San Diego's Agriculture



Programs and Services



Staff



MESSAGE FROM THE AGRICULTURAL COMMISSIONER



County of San Diego

HA DANG
AGRICULTURAL
COMMISSIONER/ SEALER
OF WEIGHTS & MEASURES

DEPARTMENT OF AGRICULTURE, WEIGHTS & MEASURES
9325 HAZARD WAY, STE. 100, SAN DIEGO, CA 92123-1217
(858) 694-2739
FAX (858) 467-9697
<http://www.sdcawm.org>

GARRETT COOPER
ASSISTANT AGRICULTURAL
COMMISSIONER/ SEALER
OF WEIGHTS & MEASURES

Secretary Karen Ross
California Department of Food and Agriculture
and
The Honorable Board of Supervisors of the County of San Diego
Supervisor Terra Lawson-Remer, Chair
Supervisor Monica Montgomery Steppe, Vice Chair
Supervisor Paloma Aguirre, Chair Pro Tem
Supervisor Joel Anderson
Supervisor Jim Desmond

I respectfully submit the County of San Diego Department of Agriculture, Weights & Measures' 2024 Crop Statistics and Annual Report of acreage, yield, and value of agricultural production for San Diego county. In 2024, the direct economic output from agricultural production totaled \$1,673,927,223. This equates to an increase of about \$18 million or 1.1% from 2023's total value of \$1,656,337,261. The overall acreage devoted to commercial agriculture fell from 210,732 acres in 2023 to 207,322 acres in 2024 for a decrease of about three thousand acres or 1.6% overall.

This report details crop information and highlights the many diverse programs that promote the county's goals by supporting food security, agricultural trade, public health, consumer confidence, and a sustainable environment.

Special thanks to the producers, industry groups, and public agencies who provided vital information for this report. I would 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



2024 OVERVIEW OF CHANGES



The overall value of commercial agriculture in San Diego county increased about \$17.6 million or 1.06% from 2023 to 2024. This change is mainly due to the increase of \$23,434,775 or 31% in total production value of Vegetable, Other. Along with these positive changes, San Diego's agricultural diversity continues to show resilience in difficult times. The groups that thrived this year were Vegetable & Vine Crops, Livestock & Poultry, and Forest Products. On the other hand, Nursery & Cut Flower Products, Fruit & Nut Products, Field Crops, and Apiary Products declined in value, due in part to reduced acreage, lower product demand, price decreases, and diminished yields.

Bedding Plants, Color, Perennials, Cacti & Succulents is still the top crop group, bringing in a total of \$395,366,388 or 24% of the total value of agriculture production in San Diego county. The second most valuable group is Ornamental Trees and Shrubs, valued at \$385,803,071, equaling 23% of the region's overall agricultural production value.

The value of Nursery & Cut Flower Products dropped by 1% to \$1,166,557,508. Besides the decreases in the Nursery Products subgroup there was also a 2% decrease in the overall value of the Cut Flower Products subgroup. Cut Flower Products such as Proteas Outdoor value increased by 5%, while all other categories in that subgroup decreased in value. The most significant decrease in percent value of 8% is attributed to Foliage. The reduction in the value of some Nursery & Cut Flower Products is due to a decrease in acreage and reduced sales.

Fruit & Nut Crops' value decreased to \$289,128,077, a 1% drop from the previous year. The overall value of Citrus decreased by 2% compared to last year, along with a 5% decrease in acreage. Citrus crops that increased in value included Kumquats, Oranges, and Tangerines & Tangelos, rising by 19%, 9%, and 2%, respectively. All other citrus varieties saw declines in value, driven by a combination of reduced acreage and lower yields, contributing to an overall decrease in the Total Citrus category value. The value of Avocados slightly decreased due to a lower yield compared to the previous year, as well as reduced prices. However, the trend of an increase in value driven by rising prices and acreage was seen in the Fruit & Nuts, Other category. The value of Grapes, Wine decreased by 16% due to drop in yield and prices. The value of Berries, Other increased by 14% due to a higher yield and prices as growers reported favorable weather conditions including coastal humidity and warm days.

Vegetable & Vine Crops' value increased to \$113,096,728, a 26% increase from last year. This increase was primarily due to a 31% rise in the value of Vegetables, Other. On the other hand, there was 5% decrease in the value of Squash. The overall increase in value for this group is associated with an increase in prices.

Apiary Products were valued at \$3,497,675, a 26% decrease from last year. The decrease is mainly due to a 47% drop in Honey and Beeswax production, caused by slightly decreased prices and inconsistencies in rainfall. Pollination dropped 6% as there were fewer colonies used for these services and stagnating pollination fees.

Livestock & Poultry were valued at \$96,823,235, a 12% increase from last year. This rise is due to the increased values of most Livestock & Poultry Products, which includes milk, eggs, and chicken.

Field Crops' value decreased to \$3,924,542, which is 13% lower than last year. This decrease was mainly driven by Field, Other, which dropped by 34% in value due to a decrease in acreage and prices.

In summary, although total agricultural acreage in San Diego county declined, the overall value of agricultural production still rose by over 1%. This increase can be attributed to stronger market prices for key crops and improved yields in selected high-value commodities. It highlights how efficiency gains and favorable economic conditions can outweigh reductions in land use.



HIGHLIGHTS



2024 HIGHLIGHTS

TOTAL VALUE OF PRODUCTION	\$1,673,927,223
Total Acreage	207,322
Commodity with Highest Reported Dollar Value	Bedding Plants, Color, Perennials, Cacti & Succulents
Highest Dollar Value Per Acre	Indoor Flowering & Foliage Plants (including Poinsettia)
Lowest Dollar Value Per Acre	Range
Greatest % Increase in Total Dollar Value from 2023	Vegetables, Other
Greatest % Decrease in Total Dollar Value from 2023	Honey & Bees Wax
Commodity with Greatest Amount of Planted Acreage	Avocados

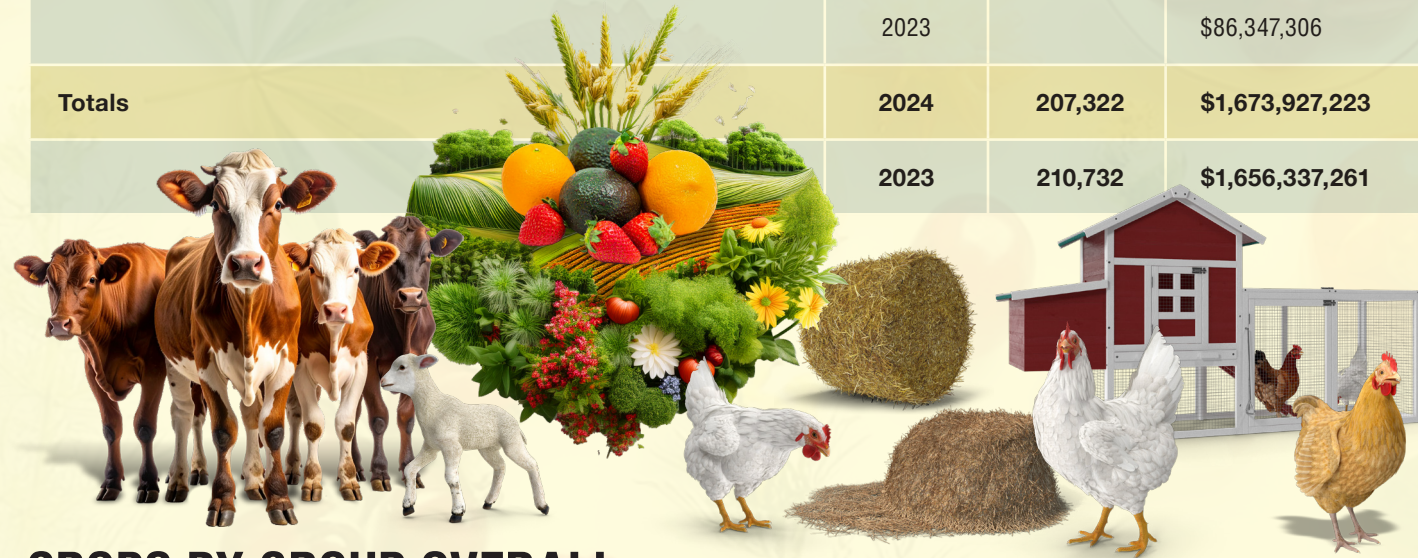


CROPS BY GROUP

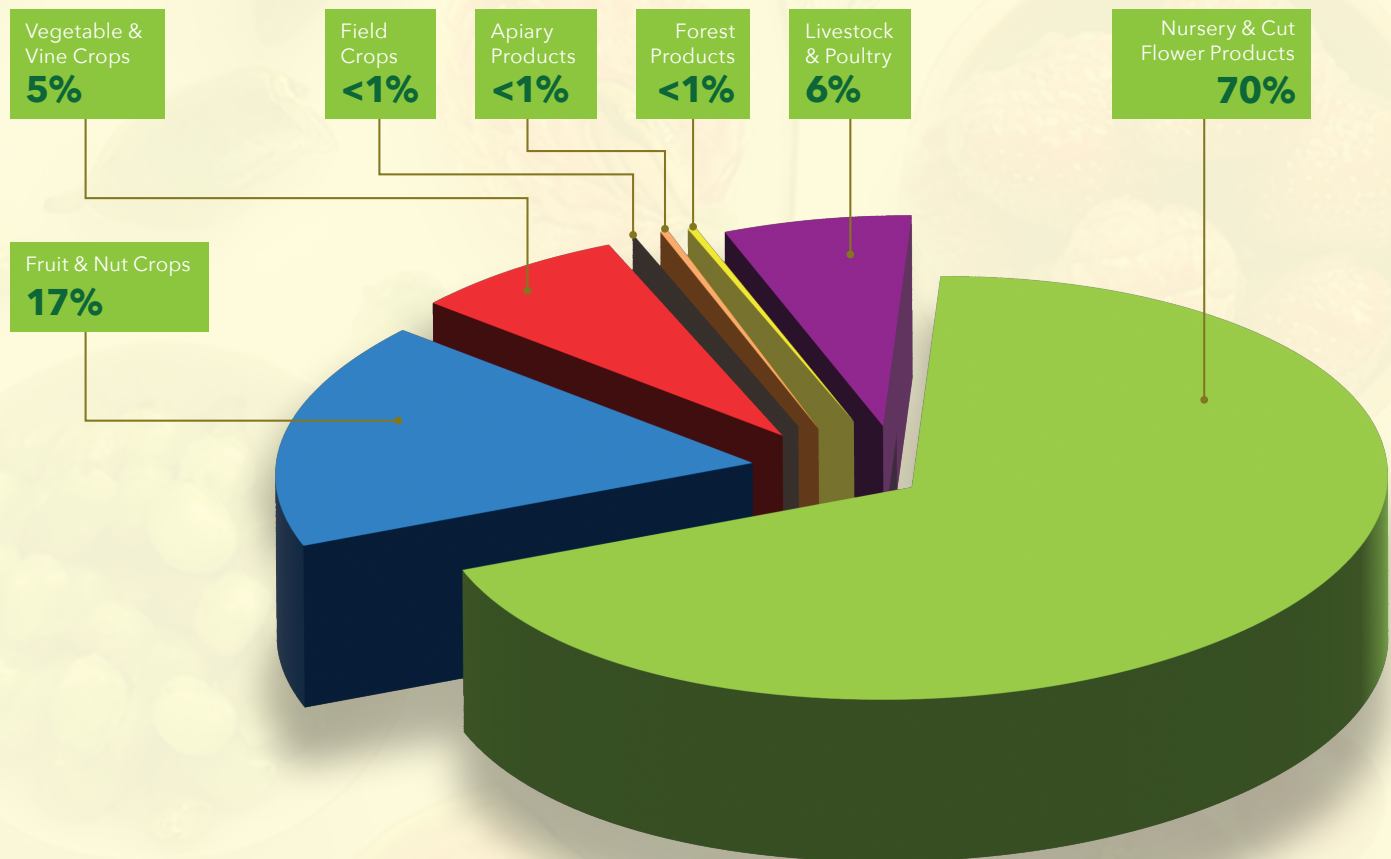
CROP	YEAR	ACRES	TOTAL VALUE
Nursery & Cut Flower Products	2024	10,466	\$1,166,557,508
	2023	10,755	\$1,177,552,435
Fruit & Nut Crops	2024	24,347	\$289,128,077
	2023	23,967	\$292,644,242
Vegetable & Vine Crops	2024	2,900	\$113,096,728
	2023	2,847	\$89,665,332
Field Crops	2024	169,608	\$3,924,542
	2023	173,162	\$4,489,288
Apiary Products	2024		\$3,497,675
	2023		\$4,749,866

CROPS BY GROUP CONTINUED

CROP	YEAR	ACRES	TOTAL VALUE
Forest Products	2024		\$899,458
	2023		\$888,792
Livestock & Poultry	2024		\$96,823,235
	2023		\$86,347,306
Totals	2024	207,322	\$1,673,927,223
	2023	210,732	\$1,656,337,261



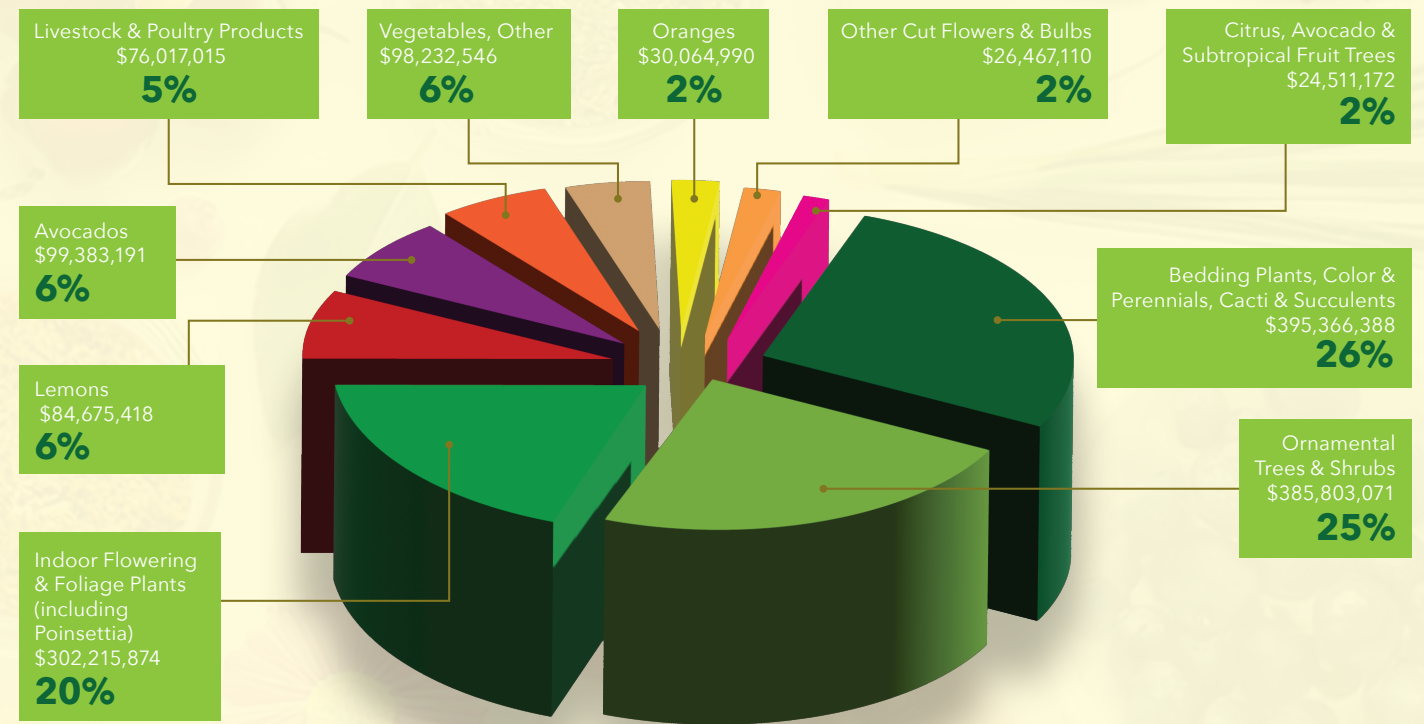
CROPS BY GROUP OVERALL



TOP TEN CROPS

TOP TEN CROPS	2024 VALUE	GROUP
Bedding Plants, Color, Perennials, Cacti & Succulents	\$395,366,388	Nursery & Cut Flower Products
Ornamental Trees & Shrubs	\$385,803,071	Nursery & Cut Flower Products
Indoor Flowering & Foliage Plants (including Poinsettia)	\$302,215,874	Nursery & Cut Flower Products
Avocados	\$99,383,191	Fruit & Nut Crops
Vegetables, Other	\$98,232,546	Vegetable & Vine Crops
Lemons	\$84,675,418	Fruit & Nut Crops
Livestock & Poultry Products	\$76,017,015	Livestock & Poultry
Oranges	\$30,064,990	Fruit & Nut Crops
Other Cut Flowers & Bulbs	\$26,467,110	Nursery & Cut Flower Products
Citrus, Avocado & Subtropical Fruit Trees	\$24,511,172	Nursery & Cut Flower Products

TOP 10 CROPS OVERALL



NURSERY PRODUCTS

CROP	YEAR	ACRES	TOTAL VALUE
Bedding Plants, Color, Perennials, Cacti & Succulents	2024	1,901	\$395,366,388
	2023	1,901	\$396,623,341
Cacti & Succulents*	2024	1,024	
	2023	1,024	
Citrus, Avocado & Subtropical Fruit Trees	2024	225	\$24,511,172
	2023	216	\$21,991,331
Indoor Flowering & Foliage Plants (Including Poinsettia)	2024	759	\$302,215,874
	2023	797	\$316,855,338
Ornamental Trees & Shrubs	2024	4,432	\$385,803,071
	2023	4,590	\$383,114,393
Turf, Cut Christmas Trees	2024	782	\$17,897,008
	2023	812	\$17,443,366
Total Nursery Products	2024	8,099	\$1,125,793,513
	2023	8,316	\$1,136,027,770

*Combined the value of Cacti & Succulents with Bedding Plants, Color, Perennials

CUT FLOWER PRODUCTS

CROP	YEAR	ACRES	TOTAL VALUE
Leptospermum Outdoor	2024	193	\$607,518
	2023	201	\$620,384
Proteas Outdoor	2024	383	\$2,352,578
	2023	376	\$2,248,966
Wax Flowers Outdoor	2024	568	\$4,120,951
	2023	590	\$4,208,064
Other Cut Flowers & Bulbs	2024	802	\$26,467,110
	2023	827	\$26,584,165
Foliage	2024	421	\$7,215,840
	2023	445	\$7,863,087
Total Cut Flower Products	2024	2,367	\$40,763,996
	2023	2,439	\$41,524,666
Total Nursery & Cut Flower Products	2024	10,466	\$1,166,557,508
	2023	10,755	\$1,177,552,435



FRUIT & NUT CROPS

CROP	YEAR	ACRES HARVESTED	TONS/ACRE	TONS	US \$/TON	TOTAL VALUE
Apples	2024	103	1	150	\$3,097	\$464,691
	2023	99	2	151	\$2,790	\$421,899
Avocados	2024	12,848	3	36,046	\$2,757	\$99,383,191
	2023	12,306	3	35,108	\$2,847	\$99,945,728
Berries, Other	2024	236	7	1,535	\$9,417	\$14,451,708
	2023	238	6	1,442	\$8,801	\$12,695,235
Total Citrus	2024	7,805	15	114,515	1,232	\$141,120,032
	2023	8,185	15	123,829	\$1,168	\$144,577,389
Grapefruit	2024	1,011	16	15,704	\$955	\$14,994,409
	2023	1,007	17	17,037	\$973	\$16,579,932
Kumquats	2024	61	4	236	\$4,379	\$1,034,236
	2023	52	4	215	\$4,033	\$868,491
Lemons	2024	2,495	18	44,457	\$1,905	\$84,675,418
	2023	2,810	20	54,841	\$1,628	\$89,280,971
Limes	2024	184	4	715	\$2,105	\$1,504,465
	2023	197	4	762	\$1,979	\$1,507,101
Oranges	2024	3,673	13	48,901	\$615	\$30,064,990
	2023	3,701	12	45,897	\$603	\$27,676,024
Tangerines, Tangelos	2024	380	12	4,501	\$1,965	\$8,846,515
	2023	419	12	5,077	\$1,707	\$8,664,871



FRUIT & NUT CROPS

CROP	YEAR	ACRES HARVESTED	TONS/ACRE	TONS	US \$/TON	TOTAL VALUE
Grapes, Wine	2024	1,110	2	2,136	\$1,942	\$4,149,301
	2023	1,100	2	2,487	\$1,974	\$4,910,340
Fruit & Nuts, Other	2024	1,894				\$17,620,424
	2023	1,707				\$16,248,986
Persimmons	2024	125	4	459	\$2,360	\$1,082,376
	2023	115	4	434	\$2,260	\$979,964
Strawberries	2024	226	19	4,214	\$2,576	\$10,856,355
	2023	217	19	4,029	\$3,193	\$12,864,701
Total Fruit & Nut Crops	2024	24,347				\$289,128,077
	2023	23,967				\$292,644,242



VEGETABLE & VINE CROPS

CROP	YEAR	ACRES HARVESTED	TONS/ACRE	TONS	US \$/TON	TOTAL VALUE
Cucumbers	2024	52	7	376	\$2,273	\$855,208
	2023	51	10	490	\$1,808	\$885,581
Herbs/Spices	2024	185	8	1,460	\$7,326	\$10,698,343
	2023	141	10	1,411	\$7,438	\$10,491,114
Squash	2024	350	11	3,803	\$870	\$3,310,631
	2023	392	10	3,875	\$901	\$3,490,867
Tomatoes *	2024	1,182				
	2023	1,119				
Vegetables, Other *	2024	2,313				\$98,232,546
	2023	2,263				\$74,797,771
Total Vegetable & Vine Crops	2024	2,900				\$113,096,728
	2023	2,847				\$89,665,332

*Combined the value of Tomatoes with Vegetables, Other



LIVESTOCK & POULTRY

COMMODITY	YEAR	NUMBER OF HEAD	TOTAL WEIGHT CWT	US \$/CWT	TOTAL VALUE
Cattle & Calves	2024	11,061	99,547	\$161	\$16,038,173
	2023	11,293	101,636	\$140	\$14,228,996
Hogs & Pigs	2024	1,550	3,876	\$67	\$260,037
	2023	1,577	3,942	\$66	\$260,161
Chickens	2024		47,172	\$93	\$4,386,650
	2023		59,162	\$86	\$5,101,489
Lambs & Sheep	2024	819	819	\$148	\$121,360
	2023	851	851	\$140	\$119,195
Livestock & Poultry Products *	2024				\$76,017,015
	2023				\$66,637,466
Total Livestock & Poultry	2024				\$96,823,235
	2023				\$86,347,306

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



FOREST PRODUCTS

COMMODITY	YEAR	TOTAL VALUE
Firewood	2024	\$899,458
	2023	\$888,792
Total Forest Products	2024	\$899,458
	2023	\$888,792



FIELD CROPS



COMMODITY	YEAR	ACRES	TONS/ACRE	TONS	US \$/TON	TOTAL VALUE
Hay, Oat	2024	1,232	1	1,667	\$210	\$350,722
	2023	1,146	1	1,623	\$253	\$410,687
Pasture, Irrigated	2024	689				\$1,481,181
	2023	693				\$1,465,030
Range	2024	166,975				\$1,018,311
	2023	170,384				\$976,711
Field, Other *	2024	712				\$1,074,327
	2023	938				\$1,636,859
Total Field Crops	2024	169,608				\$3,924,542
	2023	173,162				\$4,489,288

*Combined Industrial Hemp with Field, Other



APIARY PRODUCTS

COMMODITY	YEAR	TOTAL VALUE
Honey & Bees Wax *	2024	\$1,266,497
	2023	\$2,367,668
Pollination	2024	\$2,231,178
	2023	\$2,382,198
Total Apiary Products	2024	\$3,497,675
	2023	\$4,749,866

*Combined Bees Wax with Honey

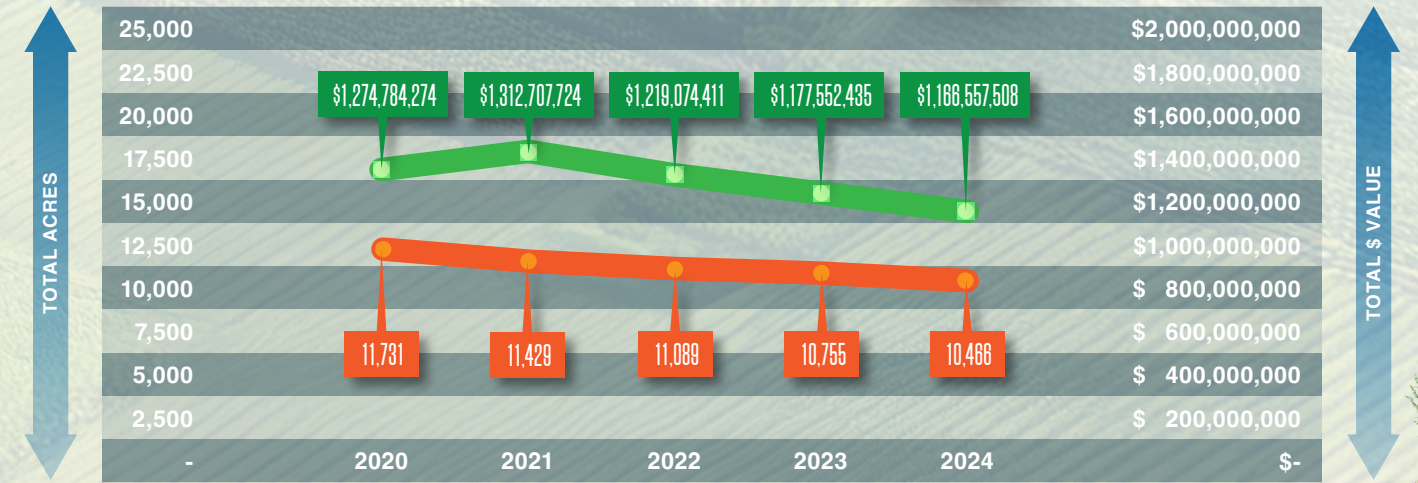


FIVE YEAR TREND ANALYSIS

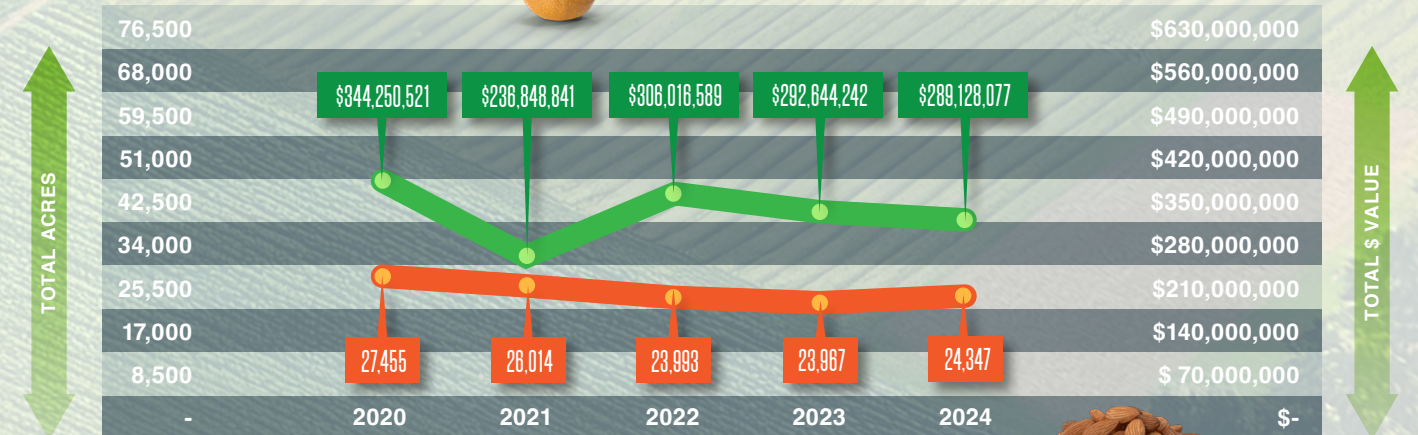
TOTAL ACRES
TOTAL \$ VALUE



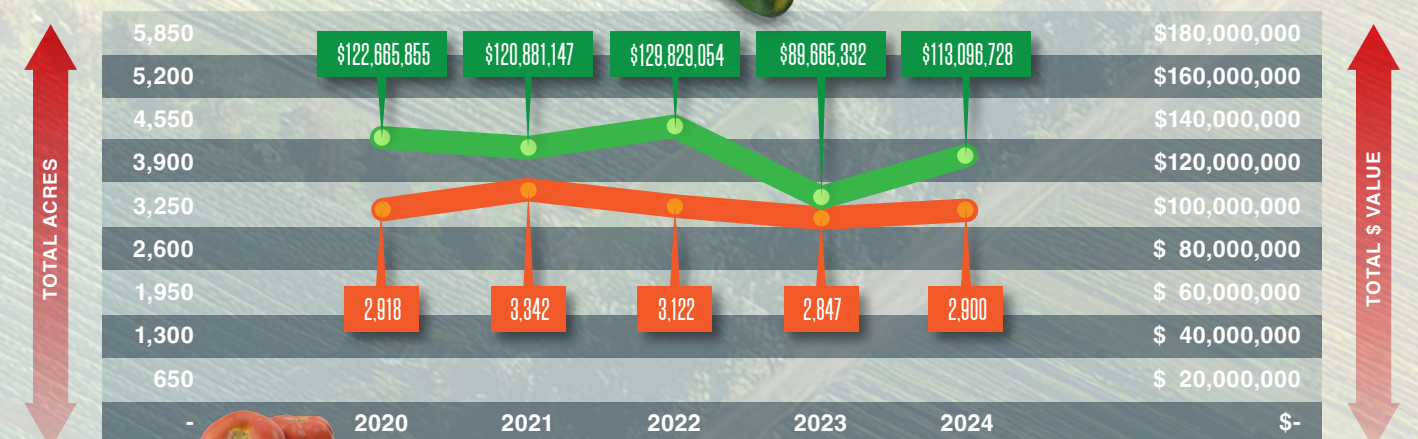
NURSERY & CUT FLOWER PRODUCTS



FRUIT & NUT CROPS



VEGETABLE & VINE CROPS



INTERNATIONAL TRADING PARTNERS

IN 2024, AWM CERTIFIED 10,892 SHIPMENTS OF PLANT MATERIAL (INCLUDING FRUITS AND VEGETABLES) TO 37 COUNTRIES

CENTRAL AMERICA & THE CARIBBEAN

Guatemala	28
Panama	9
Bahamas	6
Honduras	3
Costa Rica	2
Bermuda	2
El Salvador	1
TOTAL	51

SOUTH AMERICA

Ecuador	6
Chile	6
Colombia	5
Peru	3
Uruguay	1
Bolivia	1
TOTAL	22

EUROPE

Netherlands	44
United Kingdom	9
Germany	7
France	6
Spain	4
Romania	2
Italy	2
Switzerland	1
Belgium	1
Poland	1
TOTAL	77

AFRICA

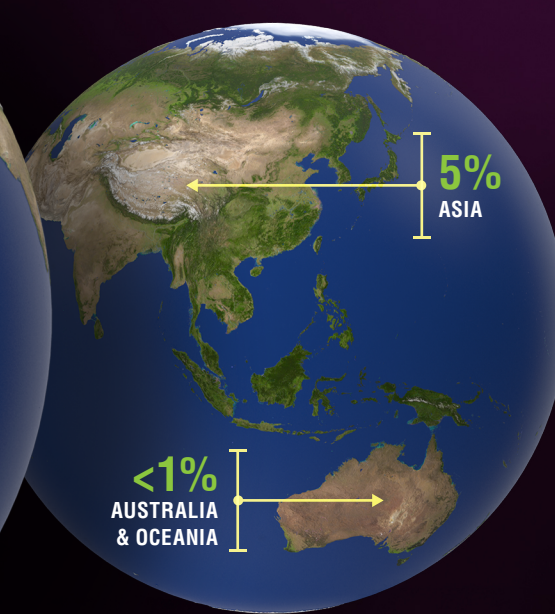
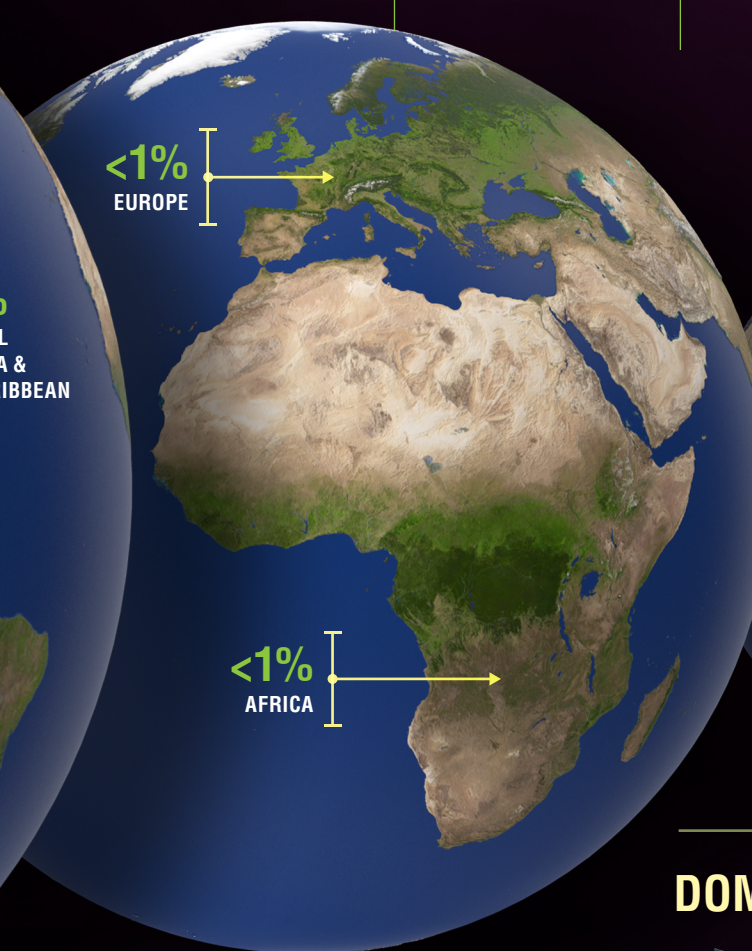
Morocco	1
TOTAL	1

ASIA

Japan	270
Taiwan	77
South Korea	75
Hong Kong	33
China	18
United Arab Emirates	14
Thailand	13
India	6
Singapore	3
Israel	2
TOTAL	511

AUSTRALIA & OCEANIA

Australia	20
TOTAL	20



DOMESTIC PARTNERS

Top three counties by certificate count:

149	KERN	
115	TULARE	
86	SANTA BARBARA	

Top three states by certificate count:

765	TEXAS	
468	ARIZONA	
116	FLORIDA	



TOP TRADING PARTNERS

MEXICO	9,306
CANADA	904
TOTAL	10,210

DOMESTIC TRADING



TOP ISSUED CERTIFICATES OF COMMODITIES GROWN IN SAN DIEGO COUNTY EXPORTED IN THE UNITED STATES

Commodity: Ornamental Trees & Shrubs

Certificates: 686



Commodity: Cacti & Succulents

Certificates: 128



Commodity: Bedding Plants, Color, Perennials

Certificates: 86





SUSTAINABLE AGRICULTURE



SUSTAINABLE AGRICULTURE 2024



Sustainable agriculture promotes the economic viability of local farms and residents' quality of life while preserving natural resources for future generations' needs in California. An important component of these sustainability efforts is related to mitigation activities that are essential to prevent the spread of invasive agricultural pests. This work contributes to the security of the food system and helps protect the region's biodiversity.

The County of San Diego Department of Agriculture, Weights & Measures implements State regulatory programs for the detection and exclusion of invasive insect pests, plant diseases, and weeds that cause economic and environmental harm and supports the California Department of Food and Agriculture (CDFA) in enforcing agricultural quarantines to prevent the spread of these invasive pests.

CDFA pest ratings inform county agricultural commissioners, the agricultural industry, and the public of the pests' potential harm to agriculture and the environment. These ratings also signify the pests' potential impacts to the residents' gardens. Finally, these ratings guide the regulatory actions that CDFA and county agricultural commissioners must take to mitigate the spread of these pests.

Below is a list of CDFA pest rating definitions follows:

- ▶ **A-RATED:** 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:** 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:** Pest or disease that commonly occurs in the agricultural industry and the environment and is found throughout California.

- ▶ **Q-RATED:** 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.

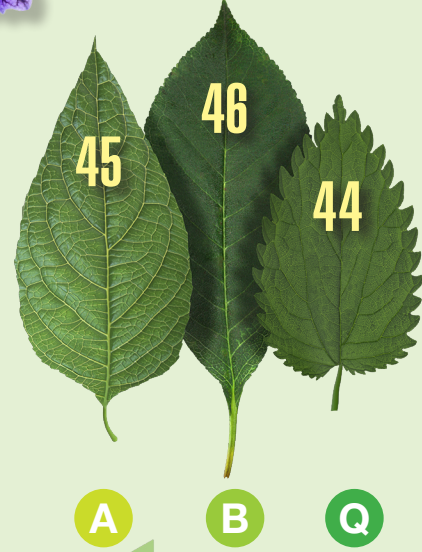
The infographics on the following two pages show the sustainable agriculture efforts in San Diego.

HIGH RISK PEST EXCLUSION

5,177 Incoming plant shipment inspections

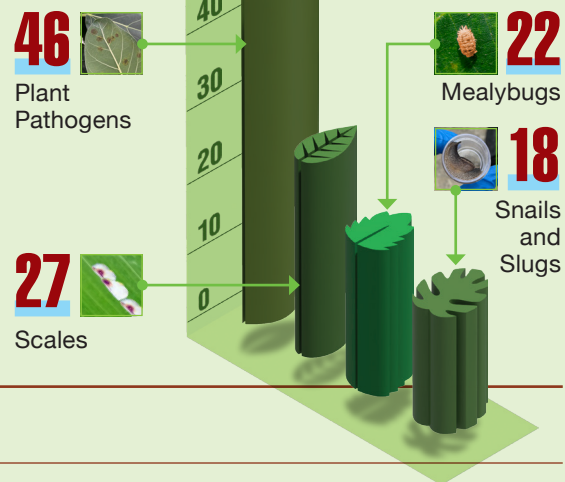
115 Notices of rejection

135 Actionable pest finds



CALENDAR YEAR 2024

AWM Inspectors intercepted and remedied a total of 46 plant pathogens, 27 scales, 22 mealybugs, and 18 snails/slugs on incoming shipments of nursery stock. One of the plant pathogens was an undescribed species of fungal pathogen new to science. Among the 27 scales, 21 were armored scales (Family Diaspididae), which are difficult to treat and can cause loss of plant quality. Seven of the mealybug interceptions were soil mealybugs that could trigger loss of markets if established. Another significant interception was that of an exotic Sri Lankan weevil that is highly mobile and could cause significant damage to nurseries, horticulture, and landscapes if it becomes established in California.



DETECTOR DOG TEAMS



2,770 FedEx, UPS and Ontrac packages found by detector dogs

23 Pests found (6 A-rated, 2 B-rated, 15 Q-rated)



PLANT PEST DIAGNOSTICS LAB

Our 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).



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 WEED SPECIES

<p>Ward's weed, <i>Carrichtera annua</i></p> <p>Rating: A</p> <p>Acreage Survey /Treated: 1.5</p>	<p>Desert knapweed (Volutaria), <i>Volutaria tubuliflora</i></p> <p>Rating: A/W</p> <p>Acreage Survey /Treated: 196.6</p>	<p>European sea lavender, <i>Limonium duriusculum</i></p> <p>Rating: B</p> <p>Acreage Survey /Treated: 2.9</p>	<p>Algerian sea lavender, <i>Limonium ramosissimum</i></p> <p>Rating: B</p> <p>Acreage Survey /Treated: 3.2</p>	<p>Croftonweed (Eupatory), <i>Ageratina adenophora</i></p> <p>Rating: B</p> <p>Acreage Survey /Treated: 1.6</p>	<p>Canary Island St. John's wort, <i>Hypericum canariense</i></p> <p>Rating: B/W</p> <p>Acreage Survey /Treated: 7.8</p>	<p>Stinknet, <i>Oncosiphon piluliferum</i></p> <p>Rating: Q</p> <p>Acreage Survey /Treated: 14.7</p>
<p>Yellow starthistle, <i>Centaurea solstitialis</i></p> <p>Rating: W</p> <p>Acreage Survey /Treated: 8.6</p>	<p>Artichoke thistle, <i>Cynara cardunculus</i></p> <p>Rating: W</p> <p>Acreage Survey /Treated: 8.9</p>	<p>Barbed goatgrass, <i>Aegilops triuncialis</i></p> <p>Rating: W</p> <p>Acreage Survey /Treated: 10.2</p>	<p>Spotted knapweed, <i>Centaurea maculosa</i></p> <p>Rating: W</p> <p>Acreage Survey /Treated: 6.7</p>	<p>Bridal broom, <i>Retama monosperma</i></p> <p>Rating: W</p> <p>Acreage Survey /Treated: 0.2</p>	<p>Total Acreage Survey/Treated: 262.9</p>	

*W – plant identified in regulations as a noxious weed

FARMING FOR THE FUTURE



BUILDING RESILIENCE IN SAN DIEGO'S AGRICULTURE

BY JORDAN KEY - DEPUTY AGRICULTURAL COMMISSIONER AND SEALER

San Diego county, celebrated for its diverse landscapes and rich biodiversity, faces growing challenges from climate change. Impacts of climate change in California are estimated in the billions of dollars per year due to coastal erosion, water shortages, flooding events, and increased fire risks. While agriculture is not widely discussed when it comes to climate change, it is severely impacted. For example, droughts like those in 2013-2016 led to a \$1.84 billion economic loss and 21,000 job loss for California's agriculture economy¹. Recognizing the importance of resiliency in the face of climate change, San Diego county's agricultural industry – a collective of over 4,000 farms – has been proactively adapting with innovative strategies that address soil health, water conservation, and pest management. By implementing these strategies, local farming not only adapts to climate impacts but actively contributes to reducing greenhouse gases and mitigating climate change.

CROP ROTATION



A Farmer



300 ACRES OF CITRUS | **32** ACRES OF OLIVE TREES

+300% INCREASE IN SOIL ORGANIC CARBON

Soil health is the foundation for resilient agriculture. Practices like compost application, cover cropping, crop rotation, and minimal or no-till farming, enhance soil fertility (improve nutrients) and increase water retention. Some farms in the region have increased soil carbon levels through these methods, sequestering carbon and reducing greenhouse gas emissions. One such example is a local farm that encompasses over 300 acres of citrus and avocado orchards, and 32 acres of olive trees. By implementing soil health practices, they increased soil organic carbon by 300%, improving fertility, water retention, carbon sequestration, and promoting soil biodiversity, all of which contribute to a healthier and more resilient agricultural system².

San Diego County



20
AWARDS

TOTALING
\$804,308
FOR REDUCING AN
ESTIMATE OF:



4,477 CO₂ Annually

County of San Diego programs such as the Sustainable Operations in Land Stewardship (SOILS) Program support climate-smart land practices such as compost application, hedgerow planting, and cover cropping. The SOILS Compost Voucher Program helps agricultural producers offset compost costs in the unincorporated areas.

At the state level, the California Department of Food and Agriculture's (CDFA) Healthy Soils Program provides financial incentives for on-farm conservation practices. San Diego county growers have received 20 awards totaling \$804,308³, reducing an estimated 4,477 metric tons of CO₂ equivalent annually.

Water conservation remains a priority in this drought-prone region. Farmers have adopted cutting-edge technologies and practices designed to optimize water use and reduce waste, such as advanced drip irrigation systems paired with soil moisture sensors. These sensors monitor soil moisture levels and can automatically adjust irrigation schedules to ensure crops receive the precise amount of water needed, preventing over-watering and reducing water waste. Additionally, rainwater harvesting systems are being used to capture, store, and reuse rainwater from rooftops and other surfaces. These systems help reduce reliance on municipal water sources and promote sustainable water use practices.

The University of California Cooperative Extension (UCCE) in San Diego county helps farmers conserve water by providing research-based support on efficient irrigation. Through workshops and field demonstrations, UCCE promotes smart irrigation and soil moisture management to reduce waste and boost productivity. Government agencies also support water efficiency. The County offers irrigation upgrade rebates, while the San Diego County Water Authority provides cost-sharing and rebates for efficient systems. CDFA's State Water Efficiency and Enhancement Program funds irrigation improvements, including drip systems, pump retrofits, and renewable energy installations.

Climate change also creates secondary effects by disrupting ecosystems and allowing for the introduction and proliferation of various pest species. For instance, a study highlighted by the U.S. Department of Agriculture indicates that climate change is driving a surge in insects that attack crops like almonds, peaches, and walnuts in California⁴.

Additionally, in 2023, California experienced an unprecedented outbreak of invasive fruit flies, the worst in CDFA's 100-year history. Fruit fly detections soared from around 75 detections annually to nearly 1,180 detections in 2023. Warmer winters, earlier springs, and hotter summers disrupt natural life cycles, leading to increased pest populations and heightened risks to crops.

Associated with the increase in invasive pest activity and populations is the need for local agricultural operations to consider innovative pest management strategies. This is especially true for the ornamental nursery industry, where customers demand aesthetically pleasing, pest-free products. Valued at approximately \$1.17 billion in 2024, the nursery industry in San Diego county represents 70% of the county's total agricultural value. To address these concerns and reduce dependency on pesticides, farmers have been implementing Integrated Pest Management (IPM) techniques. IPM practices may include planting beneficial vegetation to attract predatory insects, introducing crop rotations, incorporating native plants to increase biodiversity, and implementing cultural and environmental controls alongside chemical methods. These practices not only decrease reliance on chemical controls but also promote healthy soils.

When applying chemical controls or pesticides, agriculture operations must first obtain a permit from the County of San Diego Department of Agriculture, Weights and Measures, and meet requirements that increase the safety of employees, the community, and the environment. Pesticides that have been classified as more hazardous due to their potential risk require additional Restricted Materials

Permits (RMPs). Over the last five years, RMPs issued for production agriculture in San Diego county has decreased significantly, from 60 permits in 2019 to just 36 in 2024, reflecting a 40% reduction. Similarly, the acres treated with restricted materials have dropped by over 67%, from 29,410 acres in 2019 to 9,523 acres in 2024. While factors such as urbanization and shifts in the types of commodities grown in the region may contribute to this trend, the reduction in RMPs also suggests a transition towards alternative pest management strategies.

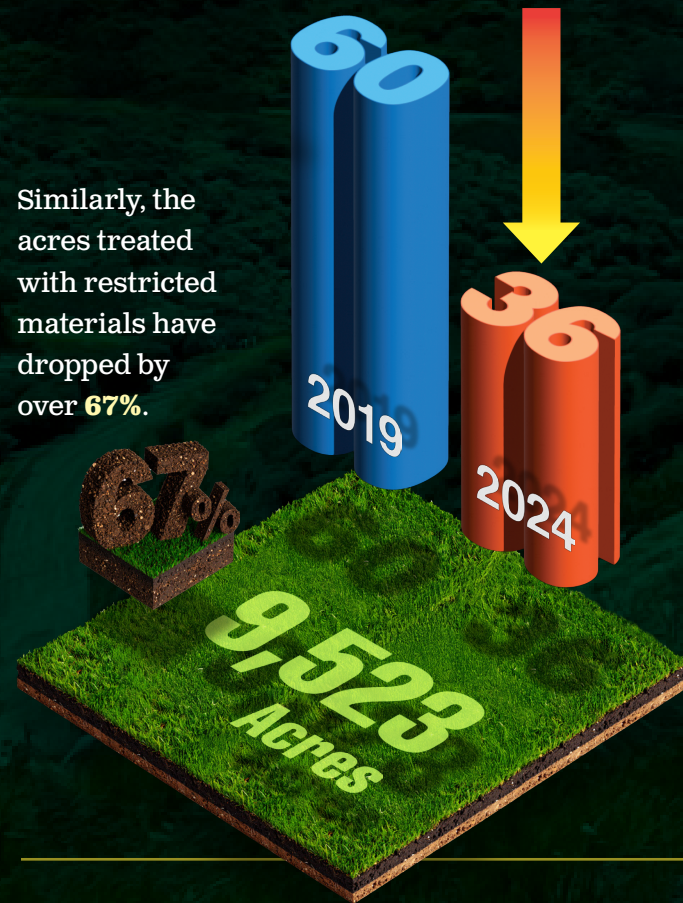
OVER THE LAST FIVE YEARS

RMPs issued for production agriculture in San Diego county have decreased significantly.



40%
Reduction

Similarly, the acres treated with restricted materials have dropped by over **67%**.



WITH NEARLY ONE MILLION ORCHARD TREES LOST FROM THE YEARS 2000 TO 2015 RELEASING OVER 300,000 TONS OF CARBON⁵

THE IMPORTANCE OF KEEPING SAN DIEGO FARMING ACTIVE AS A CLIMATE-SMART STRATEGY IS CLEAR!



San Diego county's agricultural community exemplifies how farming can lead the way in addressing climate change through innovation, resilience, and environmental stewardship. With nearly one million orchard trees lost from 2000 to 2015 – releasing over 300,000 tons of carbon⁵ – the importance of keeping San Diego farming active as a climate-smart strategy is clear. While the sector has made remarkable strides in adopting resilient

practices, continued support through grants, technical assistance, and market-based solutions is essential to amplify these efforts. By fostering collaboration between farmers, policymakers, and stakeholders, San Diego can serve as a model for balancing economic resilience with environmental sustainability.

SOURCES:

- 1 Lucas, Becca. "The Economic Impacts of the Climate Crisis." *CalCAN - California Climate & Agriculture Network*, 14 July 2020, calclimateag.org/the-economic-impacts-of-the-climate-crisis/. Accessed 17 July 2025.
- 2 "Objectives 1-4 Address Major, Interrelated Challenges That San Diego County Farms, Fisheries, Food Businesses, and Workers Face in Bringing Food from Farm and Ocean to Plate." *San Diego County Food Vision 2030*, San Diego Food System Alliance, sdfoodvision2030.org/wp-content/uploads/2021/07/objective-1-preserve-agricultural-land-and-soils-and-invest-in-long-term-food-production.pdf. Accessed 17 July 2025.
- 3 Shobe, Brian, et al. "The California Healthy Soils Program: A Progress Report." *California Climate & Agriculture Network*, Dec. 2020, calclimateag.org/wp-content/uploads/2020/11/CA-HSP-Progress-Report-CalCAN_FinalWeb.pdf. Accessed 17 July 2025.
- 4 Kan-Rice, Pamela. "Climate Change to Drive Surge in Insects That Attack Almonds, Peaches, Walnuts." *National Institute of Food and Agriculture, University of California Agriculture and Natural Resources*, Dec. 2023, www.nifa.usda.gov/about-nifa/impacts/climate-change-drive-surge-insects-attack-almonds-peaches-walnuts?utm_source=chatgpt.com. Accessed 17 July 2025.
- 5 "Picking up the Pace: Preserving Agriculture in San Diego County." *Agriculture, Weights and Measures County of San Diego*, July 2019, www.sandiegocounty.gov/content/sdc/sustainability/news/PACE.html?utm_source=chatgpt.com. Accessed 17 July 2025.





PROGRAMS AND SERVICES



PROGRAMS AND SERVICES – 2024 HIGHLIGHTS

The Pest Exclusion Division is the first line of defense in keeping invasive agricultural pests out of our region to protect the food supply and promote our regional economy and environmental sustainability. We inspect imported and exported plant shipments and production nurseries to look for harmful agricultural pests and support agricultural trade.

- ▶ 5,177 imported plant shipments inspected with 135 invasive pest finds
- ▶ 377 nurseries, equivalent to 8,335 acres, inspected for pests and diseases
- ▶ 161,952 Glassy-winged sharpshooter traps inspected in production nurseries

The Detector Dog Team Program supports the statewide pest prevention network and protects regional natural and agricultural resources by using two Agricultural Detector Dog Teams to check shipments at parcel facilities.

- ▶ 73 incorrectly marked packages containing plant material were intercepted by the Detector Dog Teams at terminal facilities and the United States Postal Service distribution center



The Pest Detection Program is a critical component of our statewide pest prevention network as it is the final line of defense against invasive pests to support agricultural trade and environmental sustainability. There were 173,528 insect trap inspections conducted at residential locations throughout the county. The traps are used to detect insect pests, such as invasive fruit flies, spongy moth, Japanese beetle, and other pests that pose threats to California’s agricultural and horticultural crops. The program assists both State and federal agencies in conducting activities to eradicate the pests promptly and effectively. Early detection of pests allows eradication efforts to begin before these pests multiply and spread, becoming economically challenging to control.

The Plant Pest Diagnostics Lab provides rapid preliminary identification allowing a prompt 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’s Plant Pest Diagnostics Center and the University of California Cooperative Extension (UCCE) Master Gardeners to help residents and the agricultural industry identify weeds, insect pests, and plant diseases that may be harmful to agricultural crops, landscape plants, and home gardens. Samples received by the lab are processed within 24 hours.

- ▶ Processed 4,048 regulatory plant and insect samples

The Citrus Quarantine Program is tasked with ensuring that the citrus industry complies with State regulations and quarantines regarding the Asian citrus psyllid (ACP) and Huanglongbing (HLB), or citrus greening. Controlling the movement of the insect ACP reduces the risk of spreading HLB, the most destructive disease known to citrus. The program’s primary goal is to mitigate the risk of HLB to protect the food supply and support agricultural trade.

- ▶ Performed 306 grower inspections
- ▶ Performed 260 transporter inspections
- ▶ Performed 86 packinghouse inspections
- ▶ Performed 77 fruit seller inspections
- ▶ Issued 38 compliance agreements to ensure safe movement of citrus fruit and inhibit the spread of the ACP and the deadly citrus disease, HLB
- ▶ Of the 729 shipments inspected by the program, 99% were compliant with quarantine requirements



The Apiary Program educates beekeepers on County and State apiary regulations including the requirement that beekeepers register their hive locations with the County Agricultural Commissioner. This program conducts regulatory inspections of apiaries located in unincorporated areas of the county to ensure regulatory compliance, support public health and safety, and protect pollinators. Registration promotes regulatory contacts with beekeepers for the exchange of important information on pesticide applications, quarantines, and best management practices.

- ▶ Registered 332 beekeepers, totaling 22,753 managed honeybee colonies in 814 apiary locations



The Pesticide Regulation Program (PRP) protects human health and the environment by regulating pesticide use and fostering reduced-risk pest management through evaluations of Restricted Material Permits, outreach, inspections, complaint and illness investigations, and enforcement. PRP protects the health and safety of employees and the community while supporting a sustainable environment by identifying and reducing risk associated with the handling and storage of pesticides. The California Department of Pesticide Regulation (CDPR) evaluates PRP annually and has provided an “Effective” performance rating since 2016. An “Effective” rating is the highest rating possible, indicating the program has met all CDPR’s performance standards.

- ▶ Conducted 1,719 Pesticide Regulation inspections with an approximate 94% compliance rate
- ▶ Conducted 76 Hazardous Materials Inventory inspections
- ▶ Completed 73 pesticide or antimicrobial illness investigations
- ▶ Investigated 63 pesticide use and storage complaints
- ▶ Issued 142 Restricted Materials Permits. Of the 142 Restricted Material Permits, 36 were issued to production agricultural operations, and 106 were issued to non-production agriculture settings (parks, golf courses, cemeteries) and non-agriculture settings (residential, industrial, and institutional)
- ▶ Conducted 23 outreach events reaching over 1,025 industry members and residents
- ▶ Participated in 7 industry associations meetings
- ▶ Issued 14 Cease and Desist Orders
- ▶ Took 112 enforcement actions and 337 compliance actions
- ▶ Collected 6,094 pounds of pesticides at an unwanted pesticide disposal event
- ▶ Collected 556 pounds of empty pesticide containers to recycle at three pesticide container recycling events



The Agricultural Standards Division (AGS) provides regulatory services that support access to healthy produce, increased agricultural trade, integrity in the marketplace, sustainable agricultural practices, and public safety. Activities include inspecting Certified Farmers Markets (CFM), Certified Producers (CP), organic growers/retailers/handlers, industrial hemp cultivators, and produce at wholesale and packing house locations. Additionally, AGS verifies commercial agricultural or livestock operations for inclusion in the County Ag Pass Program.

- ▶ Issued certificates to 38 CFMs and conducted 52 inspections at these markets with a compliance rate of 69%

- ▶ Issued 259 certificates to CPs and conducted 735 inspections of CPs at CFMs with a compliance rate of 96%

- ▶ Conducted 163 Fruit and Vegetable Standardization inspections with a compliance rate of 94%

- ▶ Completed 204 Organic Agriculture Program inspections among 420 active organic growers with a compliance rate of 97%

- ▶ Issued registrations to 13 growers who harvested 1.6 acres of industrial hemp, and 10 routine cultivation activities were conducted on hemp registrants with a compliance rate of 72%



The Agricultural Water Quality Program performs inspections at commercial agricultural operations to support regional water quality by ensuring compliance with the San Diego Regional Water Quality Control Board stormwater permit requirements. Outreach, inspections, and investigations focus on preventing potential pollutants such as fertilizers, pesticides, sediment, and organic waste generated by commercial agriculture activities from entering the stormwater system, impairing water quality, and harming aquatic life.

- ▶ Completed 641 inspections

- ▶ Investigated 12 complaints



The Integrated Pest Control Program supports human health and safety, and environmental sustainability by implementing the Board of Supervisors' F-45 Policy, "Pesticide Use Reduction," which mandates the use of an Integrated Pest Management (IPM) strategy. IPM is an effective and environmentally sound approach to pest prevention and management that incorporates current scientific information and control methods. It aims to prevent, manage, and eradicate unwanted pests while mitigating potential hazards to people, property, and the environment. IPCs' weed control enhances road visibility and clearance, reduces fire danger along roadways and intersections, and improves drainage to prevent flooding. The program's structural pest control work safeguards County staff and customers by mitigating public nuisances and human disease, discomfort, or injury by reducing pest populations known to be vectors of transmittable diseases.



- ▶ Treated with herbicides or manually removed 1,192 acres of weeds

- ▶ Treated 203 County facilities for structural pests

The Weights and Measures Division ensures consumers get what they pay for and supports fair competition in the marketplace to promote economic equity and sustainability. 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 (price scanners), quantity control for packages, and weighmaster compliance.

- ▶ Inspected 66,218 commercial weighing and measuring devices with a 77% compliance rate

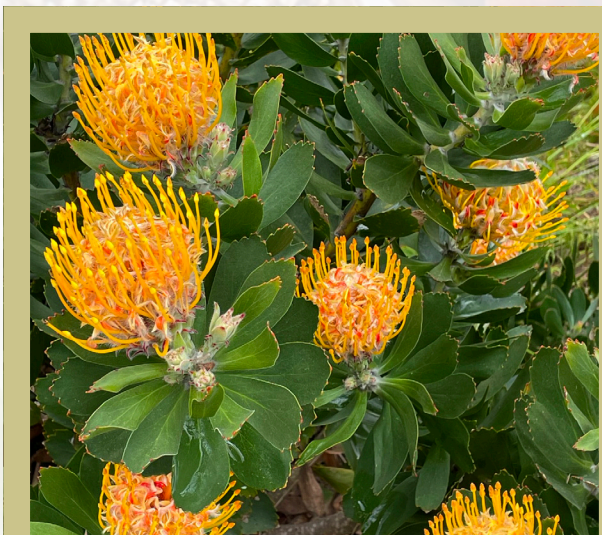
- ▶ Investigated 345 consumer complaints regarding commercial meters and scales, petroleum, package/labeling, and price overcharges

- ▶ Inspected 1,637 retail locations for price accuracy with 24,469 items scanned with an 81% compliance rate

The **Civil Actions Program** supports due process through administrative civil penalty actions, or fine actions, to gain regulatory compliance.

AWM conducted inspections to verify compliance with State laws and regulations and County ordinances. During some inspections, non-compliances were found that resulted in the issuance of 576 fines. AWM held four requested administrative hearings (one in Weights and Measures and three in Pesticide Regulation) in which the hearing officer upheld the fines. Of the civil penalty actions:

- ▶ 460 were issued by Weights and Measures (354 price verification, 94 device, 12 quantity control)
- ▶ 112 were issued by Pesticide Regulation (38 structural, 74 agricultural)
- ▶ 4 were issued by Agricultural Standards (4 direct marketing)



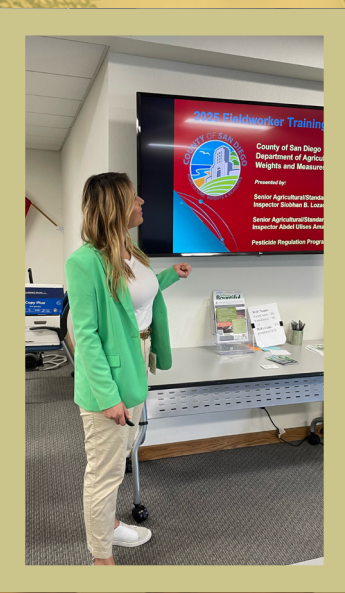
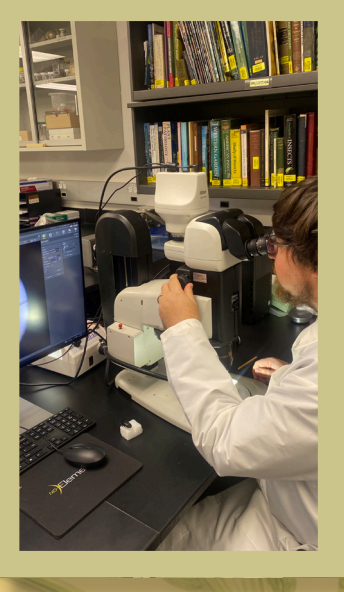
Program	Services	How to Reach Staff
AWM	All services	858-694-2739 www.sdcawm.org sdcawm@sdcounty.ca.gov
Agricultural Standards	Certified Farmers Markets and Certified Producer certificates; organic handler/producer/retail; fruit and vegetable standardization; industrial hemp cultivation; agricultural stormwater; Ag/livestock Pass	858-614-7786 FAX: 858-467-9273
Citrus Quarantine	Enforcement of Asian citrus psyllid and Huanglongbing (citrus greening) quarantine requirements	858-614-7770 FAX: 858-467-9697
Civil Actions Program	Administrative civil penalty actions, or fine actions	858-614-7730
Detector Dog Teams	Parcel inspections at terminal sorting facilities and the USPS distribution center	858-614-7770 FAX: 858-467-9697
Hazardous Materials Inventory	Inspections and registrations of agricultural hazardous materials; and California Environmental Reporting System assistance	858-694-8980 FAX: 858-467-9277
Apiary Program	Apiary registration, inspections, complaint investigations, education, and outreach	858-614-7738 FAX: 858-467-9697
Integrated Pest Control	General and invasive weed control, and structural pest control at County facilities	858-614-7750 FAX: 858-467-9279
Pest Detection	Invasive insect trapping for invasive fruit flies, spongy moth, Japanese beetle and more	858-614-7770 800-300-TRAP(8727) FAX: 858-467-9697
Pest Exclusion (Import, Export, Nursery; Pierce's Disease; Sudden Oak Death)	Inspections of incoming and outgoing plant commodity shipments; phytosanitary and quarantine compliance certificates; nursery inspections; Spongy moth and Spotted Lanternfly inspections	760-752-4700 Inspection Request Line: 760-752-4713 FAX: 760-724-4098
Pesticide Regulation	Pest Control Business Registration, Restricted Materials Permits, Operator Identification Numbers, pesticide use reporting, employee pesticide training, and pesticide complaints	858-694-8980 FAX: 858-467-9277 prp.awm@sdcounty.ca.gov
Plant Pest Diagnostics Lab	Insect identification for regulatory purposes and pest surveys	858-614-7738 FAX: 858-467-9697
Weights and Measures	Price verification (price scanners) and commercial weighing and measuring device registration and inspections, weighmaster, petroleum quality/labeling, package, and labeling inspections	858-694-2778 FAX: 858-467-9278 wm.awm@sdcounty.ca.gov Meter Testing Lab Hours: 8:00am-5:00pm M-F

The 2024 Crop Statistics and Annual Report was produced by Program Coordinator Porfirio Mancillas, Operations Research Analyst Bosko Celic, and Information Technology Principal Vince Acosta. Photos were mostly taken by AWM employees with farmers' 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. Values are aggregated to maintain farmers' confidentiality.



STAFF



HA DANG

AGRICULTURAL COMMISSIONER/SEALER OF WEIGHTS & MEASURES

GARRETT COOPER

ASSISTANT AGRICULTURAL COMMISSIONER/SEALER OF WEIGHTS & MEASURES

JASON SCHWARTZE

DEPUTY DIRECTOR

PEST EXCLUSION

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- David Navarro Supervising ASI
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- Cambria Jensen Sr. Office Assistant
- Elba Volner Supervising Office Assistant
- Leslie Bernal Office Assistant

SR. ASI

- Nicolas Basinski
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- Robert Delaval
- Saiqa Javed
- Lila Marko
- Narriman McNair
- Jorge Olivares
- Evan Padgett
- Gregory Terhall
- Matthew Forgey
- Kahsai Ghebretseha
- Ceres Phillips

ASI

- Ilyssa Boco
- Antoinette McKinley
- Jonathan Taylor

IDS II

- Richard Arne
- Stephen Breidenthal
- Nicholas Bearmar
- Johanna Hoeniger
- Roy Joseph
- Keegan Smock
- Joshua Tidwell

DETECTION, DIAGNOSTICS, QUARANTINE

- Vacant Deputy Ag Commissioner/Sealer
- Jasmine Lopez Supervising ASI
- Tyler Tkachuk Agricultural Scientist
- Rosa Sotomayor Supervising Office Assistant
- Elinor Weed Sr. Office Assistant

SR. ASI

- Jaime Garza
- Nicole Goss
- Melissa Sinkovits
- Sierra Wolf
- Jacqueline Zelon

IDS II

- Zsuzsa Carter
- Rafael Villanueva

DETECTOR DOG

- Avis
- Owen

PEST DETECTION

- Pamela Jordan Program Coordinator
- Vanessa Baltazar Sr. IDS
- Sulay Felix Sr. IDS
- Mannah Gbeh Sr. IDS
- Mohamed Jama Sr. IDS
- Ivonne Torres Sr. IDS

IDS II

- Adam Afriade
- Sayed Ahmadi
- Lindsay Anderson
- Raul Burquez
- Manuel Casillas
- Marilen Cepe
- Casey Choate
- Andrew Chung
- Oscar Contreras
- Jorge Fregoso
- Shanto George
- Douglas Guthrie
- Kevin Jones
- Kelly Lamb
- Svetozar Lazarevic
- Joshua Levin
- Loren Libolt
- Olivia Marcotte
- Rita McElroy
- Jeffrey Menard
- Jonathon Novick
- Rafael Orozco
- John Patino
- Bryce Pierce
- Joseph Rich
- Julio Sanchez
- Luis Stephano
- Erick Vazquez
- Jared Ware
- Steven White

JOB TITLES

- ASI: Agricultural/Standards Inspector
- IDS: Insect Detection Specialist
- SR: Senior

PESTICIDE REGULATION

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Gabriel Hernandez Supervising ASI
Tyler Lew Supervising ASI
Brian Pennington Supervising ASI
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SR. ASI

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Noah Toth

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Claire Orion
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ASI

Roxanna Sanchez

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Mark Martinez Supervising Pest Mgmt. Tech.
Stephanie Archuleta Office Support Specialist

PEST MGMT. TECHNICIAN I

Diego Suarez

PEST MGMT. TECHNICIAN II

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Raul Macias
Marcel Sanchez
Raymond Wood

WEIGHTS AND MEASURES

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SR. ASI

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Edith Heaton
Darin Hinesly
Craig Lawson
Margaret Maloney
Joseph Marino
Kyle Moranton
Johanna Northcote
Quang Ong
Jeremy Partch
Mazen Stevens
Jasmine Vuong

ASI

Ma Rae Aurea
Heriberto Avalos
Richard Cockroft

ADMINISTRATION

FINANCE

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Rolinda Gelacio Principal Administrative Analyst
Xiomara Cornejo Administrative Analyst III
Hannah Elanny Administrative Analyst II
Sandra Luck-Quinata Administrative Analyst II
Long Luong Administrative Analyst I
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Hanan Shoukry Staff Accountant
Mayda Pait Accounting Technician
Erlinda Espiritu Accounting Technician
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Daisy Choreno HR Specialist
Argelia Crouse HR Assistant

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Lexus Huerta Office Assistant

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