



SAN MATEO COUNTY

2019 AGRICULTURAL CROP REPORT

DEPARTMENT OF AGRICULTURE/WEIGHTS & MEASURES

Karen Ross, Secretary
California Department of Food & Agriculture

and

The Honorable Board of Supervisors of San Mateo County

Dave Pine, District 1

Carole Groom, District 2

Don Horsley, District 3

Warren Slocum, District 4

David J. Canepa, District 5



It is my pleasure to present the 2019 Annual Crop Report for San Mateo County pursuant to Section 2279 of the California Food and Agricultural Code. The total estimated gross value of San Mateo County agricultural production in 2019 was \$130,342,000, a decrease of 12.6% from 2018. It is important to note this gross value does not represent the net profit or loss, as it does not account for the inputs such as labor, packaging, transportation and other production costs.

All commodity groups posted some loss with the exception of Field Crops which remains stable. Vegetables declined by \$1.1 million in response to a softening in the price. Indoor Floral and Nursery Crops saw the largest drop of \$15.6 million, a 18% decrease. Outdoor Floral and Nursery Crops decreased by \$1.2 million with a corresponding reduction in acres grown. The decline in Floral and Nursery Crops is due in part to the downsizing of one of the major producers and the transitioning of greenhouse space from decorative potted plants and flowers to industrial hemp and cannabis. This coupled with lower cultivation prices elsewhere removed the competitive edge of traditional varieties grown.

I wish to express my gratitude to the agricultural community for sharing their business information, for without their contributions this report would not be possible. Special recognition goes to my staff Kelly Mayer, Jenny Gossett, and Michael Wong for their dedication, creativity, and attention to detail in compiling this report.

Respectfully submitted,

Koren J. Widdel
Agricultural Commissioner
Sealer of Weights and Measures

Deputy Agricultural Commissioner/Sealers
Jeremy Eide Jeremy Wagner Ione Yuen

Biologist/Standards Specialists

Erin Becker	Avneet Kakkar
Teddy Chung	Walter Mayeda
Jonathan Fausto	Kelly Mayer
Richard Garcia	Mark Melendez
Jeff Garibaldi	Nancy Poss
Mike Garibaldi	John Sorfleet
Jennifer Gossett	Bob Swanson
Joseph Hannen	Justin Thieu
Erin Herbst	Michael Wong
Marithza Hernandez	Lawrence Yang

Pest Detection Program Manager

Gerardo Ibarra Jr.

Pest Detection Specialists

Matthew Chilton	Briana Maldonado
Curtiss Coffman	Steve McDonagh
John Dunsford	Trino Oseguera
Jesus Garcia	Salvador Zambrano
Jean Paul Lorrain	Jorge Zaragoza

Management Analyst

Alberto Hernandez

Fiscal Office Specialist

Mei Wong

Payroll Personnel Coordinator

Maria Luna

P.O. Box 999
728 Heller Street
Redwood City, CA 94064
(650) 363-4700 T
(650) 367-0130 F
www.smcgov.org/agwm
smateoag@smcgov.org

GROSS PRODUCTION VALUE		
Commodity Group	2019	2018
Floral and Nursery Crops	\$90,068,000	\$106,908,000
Vegetables	26,714,000	27,849,000
Forest Products	4,381,000	4,989,000
Fruit and Nut Crops	3,432,000	3,442,000
Livestock	3,047,000	3,210,000
Field Crops	1,489,000	1,476,000
Livestock Products and Apiary	1,211,000	1,283,000
Total	\$130,342,000	\$149,157,000



FLORAL AND NURSERY CROPS



The Turning Tides of Agriculture

The coastal potted plant industry was shaken up at the end of 2019 when Bay City Flowers ended production. After 110 years in business, with heavy hearts a coastside staple closed their doors. With many San Mateo County locations, greenhouses and jobs in limbo, it was uncertain what would become of such a loss, but new life is breathing into the voids. Starting in the latter half of 2019, industrial hemp cultivation has helped offset losses and utilize some

already empty greenhouses throughout the county. While the beautiful plants from Bay City Flowers will be missed, a new sector in the agricultural industry offers an alternative.

Did you know? The indoor grown floral and foliage industry has held the majority of total agricultural sales in the county continuously since 1975. Greenhouse operations have weathered many challenges, yet remain a force for San Mateo County agriculture.

INDOOR GROWN

Crop	Year	Square Feet	Total Value
Potted Plants ¹ Flowering & Foliage	2019	4,738,000	\$66,059,000
	2018	4,765,000	\$81,467,000
Cut Flowers ²	2019	830,000	2,324,000
	2018	840,000	2,508,000
Bedding Plants, Cuttings and Liners ³	2019	264,000	3,914,000
	2018	318,000	3,974,000
TOTAL	2019	5,832,000	\$72,297,000
	2018	5,923,000	\$87,949,000

¹ Includes Campanula, Hemp, Hydrangeas, Orchids, Succulents, etc.

² Includes Alstroemeria, Freesia, Lilies, Ranunculus, etc.

³ Includes Herbs, Succulents, Vegetables, etc.

OUTDOOR GROWN

Crop	Year	Acres	Total Value
Ornamentals Nursery Stock ¹	2019	80	\$13,507,000
	2018	85	\$14,228,000
Christmas Trees (cut)	2019	151	330,000
	2018	151	300,000
Cut Flowers ²	2019	180	3,934,000
	2018	199	4,431,000
TOTAL	2019	411	\$17,771,000
	2018	435	\$18,959,000

¹ Includes herbaceous perennials, shrubs and trees.

² Includes Dahlias, Larkspur, Ranunculus, Sunflowers, etc.



Resilience in Outdoor Ornamentals

Multi-generational operators continue to be the backbone of the ornamental industry in San Mateo County and are complimented well by the ever-growing newer establishments that prove they're here to stay. As with indoor grows, outdoor flowers and potted plants compete with operations outside of the county, state and country that produce plants without the premium overhead faced here.

Fortunately, our growers have compounded knowledge throughout generations and provide top-of-the-line flowers and plants. Their products come in every color of the rainbow and bring joy to consumers nationwide. Traditions abound with bright sunflowers, aromatic

lavenders and the fresh smell of potted and farmed Christmas trees, providing comfort in the ever-changing world. From U-pick farms and Certified Farmers' Markets to San Francisco's historic wholesale flower market and retail grocers across the country, consumers can find San Mateo County grown ornamental plants and flowers to brighten the scenery.

Did you know? San Mateo County growers produced at least 150 species of outdoor cut flowers and greenery in 2019. Showy bunches of dahlias, ranunculus and sunflowers together accounted for almost 40% of total cut flower sales, produced by no less than 20 different growers.

VEGETABLE CROPS

Crop	Year	Acres	PRODUCTION			VALUE	
			Per Acre	Total	Unit	Per Unit	Total
Artichokes	2019	47	2.49	117	Ton	\$2,366	\$277,000
	2018	59	2.32	137	Ton	\$1,873	\$257,000
Beans, Fava	2019	259	3.51	909	Ton	1,088	989,000
	2018	258	3.42	882	Ton	1,365	1,204,000
Beans, Snap	2019	43	2.63	113	Ton	1,585	179,000
	2018	39	3.55	138	Ton	1,658	229,000
Brussels Sprouts	2019	802	11.80	9,464	Ton	1,423	13,467,000
	2018	788	12.22	9,629	Ton	1,479	14,241,000
Leeks	2019	67	13.61	912	Ton	1,001	913,000
	2018	90	14.05	1,265	Ton	1,170	1,480,000
Peas	2019	121	1.77	214	Ton	1,894	405,000
	2018	142	1.45	206	Ton	2,200	453,000
Pumpkins	2019	182	7.35	1,338	Ton	1,017	1,361,000
	2018	186	6.64	1,235	Ton	1,075	1,328,000
Miscellaneous Vegetables Field and Indoor Grown ¹	2019	377					9,123,000
	2018	382					8,657,000
TOTAL	2019	1,898					\$26,714,000
	2018	1,944					\$27,849,000

¹ Includes Chard, Herbs, Kale, Lettuce, Mushrooms, Peppers, Squash, etc.



Coastal Flavor & Fruitful Records

Brussels sprouts, artichokes and pumpkins are the face of the vegetable industry in San Mateo County, but many more crops thrive here. Cruciferous vegetables, leafy greens and many squash varieties are well adapted to our coastal, cooler temperate climate, as well as berries, grapes, apples and more. Growers have a variety of outlets to sell their products locally, from grocery stores and restaurants to direct customer sales at Certified Farmers' Markets, CSAs, farm stands and U-pick fields.

Artichokes have been continuously

commercially produced in San Mateo County since around 1890. A climate specific crop, artichokes continue to thrive here, as well as locally dominate Brussels sprouts which have enjoyed a foodie revival of sorts in the past few years, once word got out on how to cook them properly.

Did you know? In 2019, our county fruit growers reached new records in acreage production and sales. They produce many specialty crops and cultivars, such as delicate olallieberries known for tasty pie fillings and preserves, and over 40 apple varieties.

FRUIT AND NUT CROPS

Crop	Year	Acres	Total Value
Wine Grapes Red Varietals	2019	141	\$1,131,000
	2018	126	\$1,181,000
White Varietals	2019	40	210,000
	2018	41	226,000
Miscellaneous ¹	2019	127	2,091,000
	2018	120	2,035,000
TOTAL	2019	308	\$3,432,000
	2018	287	\$3,442,000

¹ Includes Apples, Berries, Chestnuts, Stone Fruits, etc.

LIVESTOCK

Commodity	Year	Number Head Sold	Total Value
Cattle and Calves	2019	1,677	\$2,208,000
	2018	1,706	\$2,461,000
Other ¹	2019	12,463	839,000
	2018	12,302	749,000
TOTAL	2019	14,140	\$3,047,000
	2018	14,008	\$3,210,000

¹ Includes Goats, Lambs, Pigs, Poultry, etc.

LIVESTOCK PRODUCTS AND APIARY

Commodity	Year	Production	VALUE	
			Per Unit	Total
Honey	2019	39,000 lbs	\$10.42	\$406,000
	2018	36,000 lbs	\$10.94	\$394,000
Other ¹	2019			805,000
	2018			889,000
TOTAL	2019			\$1,211,000
	2018			\$1,283,000

¹ Includes Beeswax, Cheese, Eggs, Wool, etc.

FOREST PRODUCTS

Year	Board Feet	Total Value
2019	5,402,000	\$4,381,000
2018	5,661,000	\$4,989,000

Shining the Light on Bees & Land

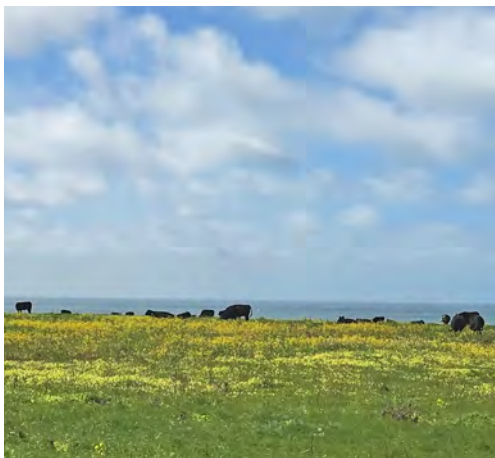


Livestock, Livestock Products and Apiary, all remained fairly stable with slight changes in 2019. Bee production rose 8% over 2018, and better tracking resulted from the new BeeWhere registration program. BeeWhere was launched as an online application for

beekeepers to easily register their honey bee hive locations across California. By registering their hives, beekeepers will receive 48-hour notification of agricultural pesticide applications near their hive location. This tracking and notification system is intended to help protect honey bee populations throughout the State.

Field Crops are somewhat of a lesser known commodity group providing staple food for livestock and humans alike, as well as keeping the coastside scenic with expansive open lands in pasture and hay.

Did you know? The total acreage of field crops in 2019 is similar to almost 75 years ago, but now these lands are concentrated from Skyline to the coast versus historically being spread across the bayside.



FIELD CROPS

Commodity	Year	PRODUCTION			VALUE	
		Acres	Per Acre	Total Unit	Per Unit	Total
Beans, Dry ¹	2019	109	0.70	76 Ton	\$5,855	\$445,000
	2018	83	0.99	82 Ton	\$5,868	\$481,000
Grain ²	2019	189	1.36	257 Ton	1067	274,000
	2018	153	1.90	291 Ton	858	250,000
Hay Oat & Rye	2019	518	2.32	1,202 Ton	187	225,000
	2018	491	2.34	1,149 Ton	187	215,000
Volunteer	2019	150	1.71	257 Ton	104	27,000
	2018	138	1.85	255 Ton	112	29,000
Pasture Irrigated	2019	175			155	27,000
	2018	185			155	29,000
Other	2019	24,567			20	491,000
	2018	23,604			20	472,000
TOTAL	2019	25,708				\$1,489,000
	2018	24,654				\$1,476,000

¹ Includes Cranberry, Gigante, Romano, Scarlet Runner, etc.

² Includes Barley, Oats, Quinoa, Rye and Wheat

ORGANIC FARMING

San Mateo County had 26 registered organic farmers in 2019, producing everything from quinoa, strawberries and tomatoes, to eggs, beans and tulips. The organic agricultural land in production was an estimated 674 acres (excluding expansive pasture) totaling an estimated gross production value of \$11,747,000. While acreage remained fairly stable, total value increased almost 11% from 2018 with much of the success attributed to direct sales to consumers.



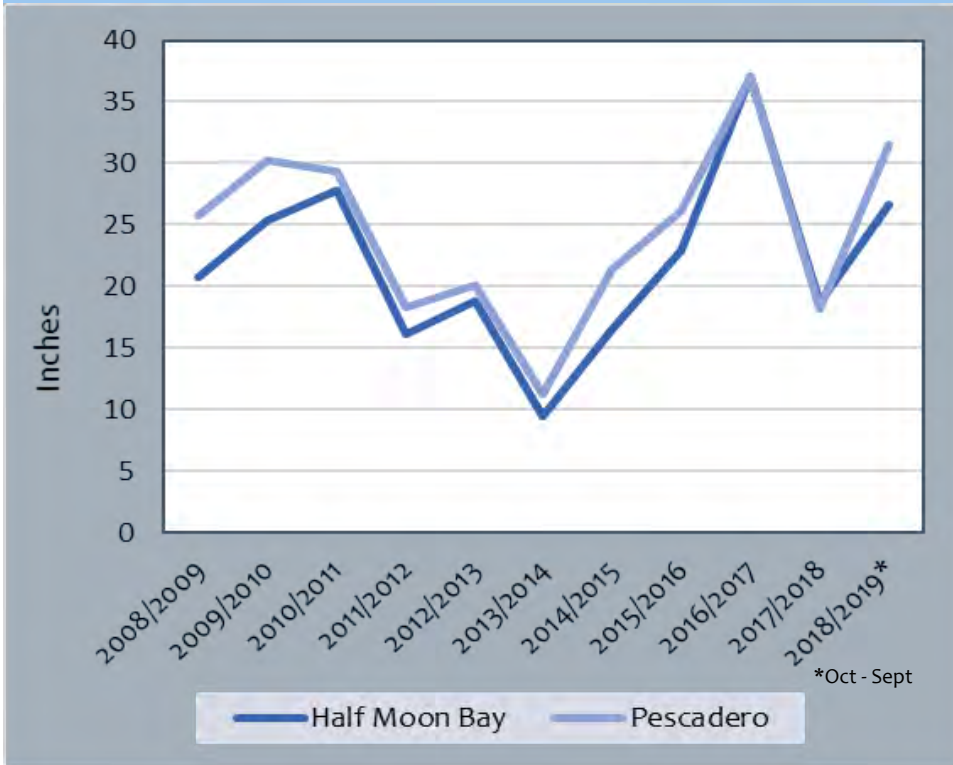
CERTIFIED FARMERS' MARKETS

Direct to consumer sales benefit farmers and consumers alike. Our Department inspects farms and Certified Farmers' Market vendors to verify they grow what they sell.

Please visit our website for information on:
 Finding a Certified Farmers' Market
 Selling at a Market
 Starting a Farmers' Market

<https://agwm.smcgov.org/certified-farmers-markets-cfm>

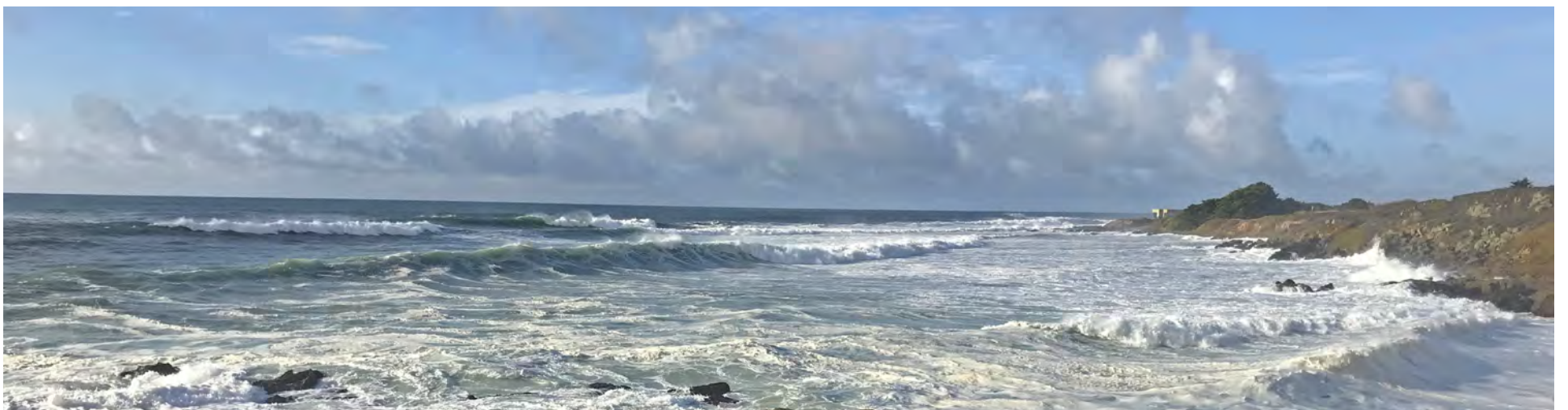
COASTSIDE RAINFALL TOTALS



INDUSTRIAL HEMP & COMMERCIAL CANNABIS



Cannabis sativa - a plant by the same name could not be regulated more differently. With the main differences being tetrahydrocannabinol (THC) content and federal legal standing, both industrial hemp cultivation and commercial cannabis cultivation in San Mateo County began in late 2019. The County's cannabis ordinance allows greenhouse grown cultivation and nursery starts, with the first county permit issued in 2019. The California Department of Food and Agriculture rolled out the Industrial Hemp Program and our county aligned with state regulations to allow cultivation registrations, starting with operations in 2019. In recent years, more greenhouse space has become available and these cultivation options may help revive the local agricultural economy.



COMMERCIAL FISH CATCH

Species	Year	Pounds	Value
Crab, Dungeness	2019	1,379,837	\$4,788,912
	2018	801,607	\$3,730,364
Salmon, Chinook	2019	495,488	\$3,213,088
	2018	278,786	\$3,323,821
Halibut, California	2019	65,284	\$348,187
	2018	46,191	\$263,121
Prawn, Spot	2019	19,377	\$337,511
	2018	12,716	\$216,815
Squid, Market	2019	446,020	\$223,855
	2018	2,512,684	\$1,249,492
Sole, all	2019	224,217	\$207,685
	2018	190,722	\$174,480
Rockfish, all	2019	291,920	\$194,340
	2018	209,067	\$136,572
Sablefish	2019	42,918	\$121,122
	2018	45,910	\$143,596

Species	Year	Pounds	Value
Anchovy	2019	1,756,152	\$87,808
	2018	3,157,224	\$157,861
Crab, Rock (unspecified)	2019	28,989	\$58,891
	2018	32,077	\$68,853
Sea Urchin	2019	6,506	\$56,606
	2018	9,659	\$66,942
Tuna, Albacore	2019	22,074	\$55,727
	2018	1,723	\$2,670
Lingcod	2019	12,723	\$24,035
	2018	18,297	\$35,799
Miscellaneous	2019	22,626	\$19,596
	2018	18,365	\$22,528
Sanddab	2019	32,818	\$15,880
	2018	91,461	\$32,666
Flounder, all	2019	7,543	\$6,573
	2018	3,921	\$3,327

Grand Total	2019	4,854,492 lbs	\$9,759,816
	2018	7,430,410 lbs	\$9,628,907

Source: California Department of Fish and Game Poundage Value of Landings Princeton-Half Moon Bay. Informational only, value not included in Annual Report

SUSTAINABLE AGRICULTURE REPORT

Sustainable Agriculture utilizes farming practices that conserve resources and plant health, and ensures the economic vitality of the farm. Activities carried out through our programs such as Pest Exclusion, Weed Management and Pest Detection provide safeguards to maintain livestock and crop health. Early pest detection and proactive management of invasive pests using Integrated Pest Management strategies help protect California's agricultural industry and reduces environmental stressors.

PEST EXCLUSION

Pest Exclusion inspections of agricultural shipments at entry points prevent the introduction and establishment of damaging pests. Exotic pests are regularly intercepted by Staff Biologists at parcel facilities, San Francisco International Airport, nurseries and other entry points during daily inspections.

Origin certifications are also verified to confirm compliance with plant quarantines, regulations and entry requirements. When an infested or noncompliant shipment is found, it may be destroyed, reconditioned and released, or returned to the shipper.

Type of Shipment	Inspections	Rejections	Pests Intercepted
Parcel Carriers	25,937	119	38
Truck	1,077	15	17
Air	3,194	18	32
Sea Containers	20	0	0
Household Goods (Gypsy Moth)	13	0	0
Nursery Stock (GWSS)	1,951	0	0

EXOTIC PESTS INTERCEPTED

Pest or Disease	Rating	Number of Interceptions	Pest or Disease	Rating	Number of Interceptions
<i>Aleurodicus disperses</i> spiraling whitefly	A	1	<i>Aleyrodidae</i> (whiteflies)	Q	9
<i>Asiothrixus antidesmae</i> whitefly	A	1	<i>Aphididae</i> (aphids)	Q	3
<i>Aspidiotus destructor</i> coconut scale	A	1	<i>Coccidae</i> (scales)	Q	5
<i>Aulacaspis tubercularis</i> armored scale	A	2	<i>Crambidae</i> (moth)	Q	1
<i>Coccus viridis</i> green scale	A	1	<i>Delphacidae</i> (planthoppers)	Q	3
<i>Euphorbia prostrata</i> prostrate spurge	A	1	<i>Diaspididae</i> (scales)	Q	13
<i>Kallitaxila granulate</i> planthopper	A	3	<i>Formicidae</i> (ants)	Q	2
<i>Kilifia acuminata</i> acuminate scale	A	1	<i>Gastropoda</i> (snails and slugs)	Q	4
<i>Maconellicoccus hirsutus</i> pink hibiscus mealybug	A	1	<i>Gelechiidae</i> (gelechiid moths)	Q	1
<i>Pinnaspis buxi</i> boxwood scale	A	4	<i>Lonchaeidae</i> (lance flies)	Q	1
<i>Pilea microphylla</i> artillery weed	A	1	<i>Lygaeidae</i> (seed bugs)	Q	3
<i>Pinnaspis strachani</i> lesser snow scale	A	2	<i>Oecophoridae</i> (concealer moths)	Q	1
<i>Planococcus minor</i> pacific mealybug	A	1	<i>Pentatomidae</i> (stink bugs)	Q	1
<i>Pseudaonidia trilobitiformis</i> trilobe scale	A	1	<i>Pseudococcidae</i> (mealybugs)	Q	9
<i>Pseudaulacaspis cockerelli</i> magnolia white scale	A	7	<i>Tetranychidae</i> (spider mites)	Q	4
<i>Pseudaulacaspis pentagona</i> white peach scale	A	3	<i>Unknown</i> (egg masses)	Q	8
<i>Pseudococcus jackbeardsleyi</i> mealybug	A	1			
<i>P. parlatorioides</i> false paralatoria scale	A	1			

"A" rated pests or diseases are of known economic significance requiring containment, eradication and rejection.

"Q" rated pests and diseases are suspected to cause economic significance requiring containment, eradication and rejection.

WEED MANAGEMENT

Invasive weed control and eradication projects continued for infestations of Fertile Capeweed, Purple Loosestrife, and Skeletonweed. Our department also funded an ongoing project to remove highly invasive Jubata Grass at two locations in order to protect natural vegetation and reduce fire risk. As the lead for the San Mateo County Weed Management Area (WMA) Group, we secured California Department of Food and Agriculture (CDFA) Noxious Weed Grant Program (NWGP) funding for Friends of Edgewood to restore native grasslands at Edgewood County Park and Natural Preserve and for California State Parks to remove Jubata Grass at Montara State Beach.

Fertile Capeweed • *Arctotheca calendula*

- Perennial rosettes with daisy-like yellow flowers, dark center
- Open or disturbed sites; growing in at least 14 parcels in the county near Bean Hollow and Hwy 1
- Mapped, hand pulled and treated with herbicides



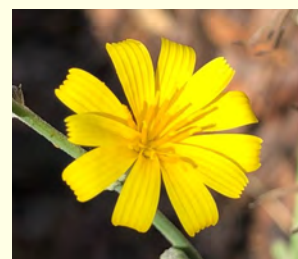
Jubata Grass • *Cortaderia jubata*

- Perennial grass, long leaves from base w/ plumed panicles maturing violet to white
- Mostly along coast in bare/sandy soil; found in thousands of acres in the County, focused on 257 acres by Pescadero Creek Road, and ongoing control at Pillar Point Bluff
- Mapped, mechanical methods and treated with herbicides



Purple Loosestrife • *Lythrum salicaria*

- Perennial clumps with spikes of purple flowers
- Wetlands; found in and around Reflection Lake in La Honda
- Mapped and hand pulled



Skeletonweed • *Chondrilla juncea*

- Perennial or biennial, basal rosettes with wiry stems and small yellow flowers
- Disturbed land; San Carlos, near Caltrain tracks, Edgewood Road/Hwy 280 and Edgewood Park
- Mapped, hand pulled and herbicide treatment

PEST DETECTION

The Pest Detection staff place and monitor insect traps throughout San Mateo County to find pests before infestation takes hold. In 2019, 4,356 traps were put in host plants and serviced 55,117 times. In February, Foster City and Redwood City each had one Asian Citrus Psyllid find. In August, an Oriental Fruit Fly was trapped in Millbrae. These finds prompted delimitation trapping of yellow panel traps for Asian Citrus Psyllid and Jackson traps for Oriental Fruit Fly without further incident. No other harmful insect plant pests from the targeted list below were found by pest detection staff.

Asian Citrus Psyllid	Japanese Beetle
European Corn Borer	Khapra Beetle
European Grape Vine Moth	Mediterranean Fruit Fly
European Pine Shoot Moth	Melon Fly
Glassy-winged Sharpshooter	Mexican Fruit Fly
Gypsy Moth	Oriental Fruit Fly
Fruit Fly Species of <i>Bactrocera</i> , <i>Dacus</i> , <i>Ceratitis</i> , and <i>Anastrepha</i>	

INTEGRATED PEST MANAGEMENT

Integrated Pest Management (IPM) is a systematic approach to managing destructive pests and keeping them below economic thresholds. IPM begins with identification and monitoring of target pests and uses interactive control strategies including: natural enemies, biological controls, sanitation, lesser toxic pesticides, traps, and pheromones to disrupt reproduction. IPM methods used by San Mateo County producers include:

Bee & Bird Netting	Insecticidal Soaps	Refined Oils
Botanical Extracts	Lacewings	Row Covers
Companion Planting	Ladybird Beetles	Sticky Traps
Cover Crops	Mowing	Soil Steam Sterilization
Crop Rotation	Mulching	Temperature/Humidity Control
Deer Fencing	Owl Boxes	Torching Weeds
Diatomaceous Earth	Parasitic Wasps	Weed Covers
Field Sanitation	Parasitic Nematodes	Vacuuming
Hedgerows	Pheromone Traps	Vertebrates as Predators
Insect Growth Regulators	Predatory Mites	Vertebrate Traps



IN MEMORIAM

Maria Mastrangelo (1956-2019)

On August 25, 2019, we lost a dear friend and valued colleague, Deputy Director Maria Mastrangelo. Maria was an integral member of the San Mateo County Agriculture/Weights and Measures Department for more than 34 years. After obtaining a Bachelor of Science degree in Biology from Rutgers University, she started her agricultural career at the U.S. Forest Service, and then joined the California Department of Food and Agriculture's medfly project in the 1980's. Maria was hired as a supervisor of San Mateo County's Pest Detection program for the Department of Agriculture in 1985. She excelled as a supervisor and soon after became a Biologist, and developed in her career working on the Coast with the growers in the Pesticide Use Enforcement program. Maria became the authority for pesticide issues for both her colleagues and industry and was promoted as a Deputy over the program in 1993. Throughout the years she oversaw many agricultural programs as well as financial operations of our Department including the budget. Maria was tirelessly dedicated to serving the public as part of the Agriculture Department and our collective conscience and institutional memory. Evidence of this could be seen in her meticulous work and the competency of her staff.

Maria added to the fabric of the department with her gregarious and light-hearted attitude. Her memory was phenomenal and she loved to tell colorful stories of her past relating them as if they happened yesterday or give history lessons that often started with "this is neither here nor there". The New Jersey native would light up when talking about her sister and nieces in D.C. and her favorite musician, Bruce Springsteen, even if it was a bit "inside baseball".

Maria was one of the finest leaders known to this Department and we are all better to have known her and worked with her. She is deeply missed.

RETIREMENT

Fred W. Crowder San Mateo County Agricultural Commissioner/Sealer 2010-2020

Fred Crowder began his career in agriculture 35 years ago serving Santa Barbara, San Francisco, Napa and Marin counties before he settled in as Agricultural Commissioner and Sealer in San Mateo County. New to the county, Fred brought forth innovative ideas and forged relationships with the agricultural community and staff alike. Fred embodied the "pro-employee" model by providing flexibility in the work place, enabling family affairs to be prioritized and encouraged maintenance of mental and physical health. The Department will be forever grateful for his role in achieving salary parity for the Biologist position.

As chief promoter of all things agriculture, Fred served the industry by expanding the "As Fresh As It Gets" marketing program to include agritourism. He was instrumental in creating the Ag Ombudsman position to help the local agricultural community navigate county permitting. Fred guided the industry and public through a Mediterranean fruit fly quarantine and collaborated with Cooperative Extension to create a Human-Wildlife Conflict Advisor position to assist ranchers and the public with managing interactions between people and wildlife. He gracefully took on controversial cannabis cultivation with acceptance and an educational approach to help guide commercial cannabis and industrial hemp growers through a complicated regulatory process. Through droughts, economic down turns, and many staff retirements, Fred continued his collaborative leadership with optimism and enthusiasm. His door was always open.

In retirement, don't be surprised if you see Fred with his sidekick, Lucy, and scythe on the side of the road eradicating invasive weeds or toiling away in his luthier workshop building a new guitar. We wish Fred a long and happy retirement.

