

# 2019 AG CROP REPORT HONORING OUR AG TEAM SUPER HEROES!

DEPARTMENT OF AGRICULTURE and WEIGHTS AND MEASURES



HIGH RISK INSPECTIONS K-9 DOG TEAM PEST DETECTION TRAPPING PROGRAM QUARANTINE ENFORCEMENT PHYTOSANITARY CERTIFICATION & EXPORT PROGRAM **ENTOMOLOGIST** 

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Thank You to all the Growers



### County of Fresno

DEPARTMENT OF AGRICULTURE MELISSA CREGAN

AGRICULTURAL COMMISSIONER/ SEALER OF WEIGHTS & MEASURES

Karen Ross, Secretary
California Department of Food and Agriculture
and
The Honorable Board of Supervisors
County of Fresno

Buddy Mendes, Chairman
Steve Brandau Sal Quintero
Brian Pacheco Nathan Magsig
Jean M. Rousseau,
County Administrative Officer

It is my pleasure to submit the 2019 Fresno County Crop and Livestock Report. This report is prepared in accordance with Sections 2272 and 2279 of the California Food and Agriculture Code; and summarizes the acreage, production, and value of agricultural commodities produced in Fresno County. The figures contained herein represent gross returns to the producers and does not reflect actual net profit.

Fresno County's total gross production value for 2019 was \$7,717,906,900. This represents a decrease of \$182,557,890 or 2.31% from the previous year's adjusted total of \$7,900,464,790.

Once again, almonds continue to be the leading agricultural commodity in Fresno County with a gross value of \$1,577,193,002 which represents 20.44% of the total gross value of all crops produced in 2019. The total gross value of grapes remained in the number two spot at \$962,856,675, followed by pistachios at \$660,640,000.

Fresno County's agricultural strength is based on the diversity of crops produced. Included in the 2019 report are over 300 different commodities, 78 of which have a gross value in excess of \$1,000,000. Although individual commodities may experience difficulties from year-to-year, Fresno County continues to supply the highest quality of food and fiber nationwide and abroad to more than 89 countries around the world.

In previous annual reports, the department has highlighted a segment of the agricultural industry. This edition will feature the work that is done by the County of Fresno Department of Agriculture in partnership with the California Department of Food and Agriculture in protecting the agricultural industry from invasive species and pests.

This report is our yearly opportunity to recognize the growers, shippers, ranchers and other businesses instrumental to and supportive of agriculture in Fresno County. I would like to extend my thanks and appreciation to industry for their continuous efforts in providing the vital information that enables the compilation of this report. Thank you to all my staff, especially Angel Gibson, Scotti Walker, and Amanda Zito for compiling and analyzing the data; Mario Reeves for the feature story; and Gina Hill with the County of Fresno Internal Services Department for the graphic design. Without their hard work and valuable input, this report would not be possible.

Respectfully submitted,

Melissa Cregan

Agricultural Commissioner/Sealer of Weights and Measures



RANK		2019 TOTAL VALUE	2018 RANK	2009 RANK
1	ALMONDS	\$1,577,193,002	1	4
2	GRAPES	\$962,856,675	2	1
3	PISTACHIOS	\$660,640,000	3	11
4	POULTRY*	\$522,720,145	4	3
5	MILK	\$404,134,000	6	6
6	GARLIC	\$370,919,548	5	10
7	CATTLE	\$349,044,000	7	5
8	TOMATOES	\$322,428,583	9	2
9	MANDARINS	\$240,333,669	10	+
10	ORANGES	\$234,886,843	12	8

Includes commodity totals reported in the "Other" categories such as organic, by-products, processed etc.

<sup>\*</sup> Includes Turkeys, Chickens, Ducks, Geese, Gamebirds & Eggs

<sup>+</sup> Not previously separated for ranking purposes

## MILLION DOLLAR CLUB

### 900 MILLION

GRAPES

### 500 MILLION

POULTRY (including Eggs)

### 200 MILLION

MANDARINS ORANGES PEACHES MELONS

#### BY THE MILLION

LEMONS	48
NURSERY	39
WALNUTS	39
HONEY	38
ALFALFA	37
RICE	36
WHEAT	35
CHERRIES	35
BLUEBERRIES	32
BELL PEPPER	27
POMEGRANATES	24
PLUOTS	20
CHILI PEPPERS	19
SHEEP & LAMBS	17
CITRUS, OTHER	17
APRICOTS	16
BEAN, SHELL	16
SQUASH	14
PEAR	14
RANGELAND	14
EGGPLANT	9

### > BILLION

**ALMONDS** 

### 400 MILLION

MILK

### 100 MILLION

ONIONS
LETTUCE
COTTON
NECTARINES

APIARY-POLLINATION

**PLUMS** 

#### BY THE MILLION

PARLSEY	9
SWINE	8
OLIVES	8
ASPARAGUS	8
MANURE	8
PERSIMMONS	6
TRITICALE	6
BROCCOLI	5
INDUSTRIAL	_
COMMODITIES	5
BITTERMELON	4
GOURD	3
LO BOK	3
DAIKON	3
SORGHUM	3
CILANTRO	2
BEAN SNAP	2
BOK CHOY	2
NAPA CABBAGE	2
KALE	1
MORINGA	1
CARROTS	1

#### 600 MILLION

**PISTACHIOS** 

#### 300 MILLION

GARLIC CATTLE TOMATOES

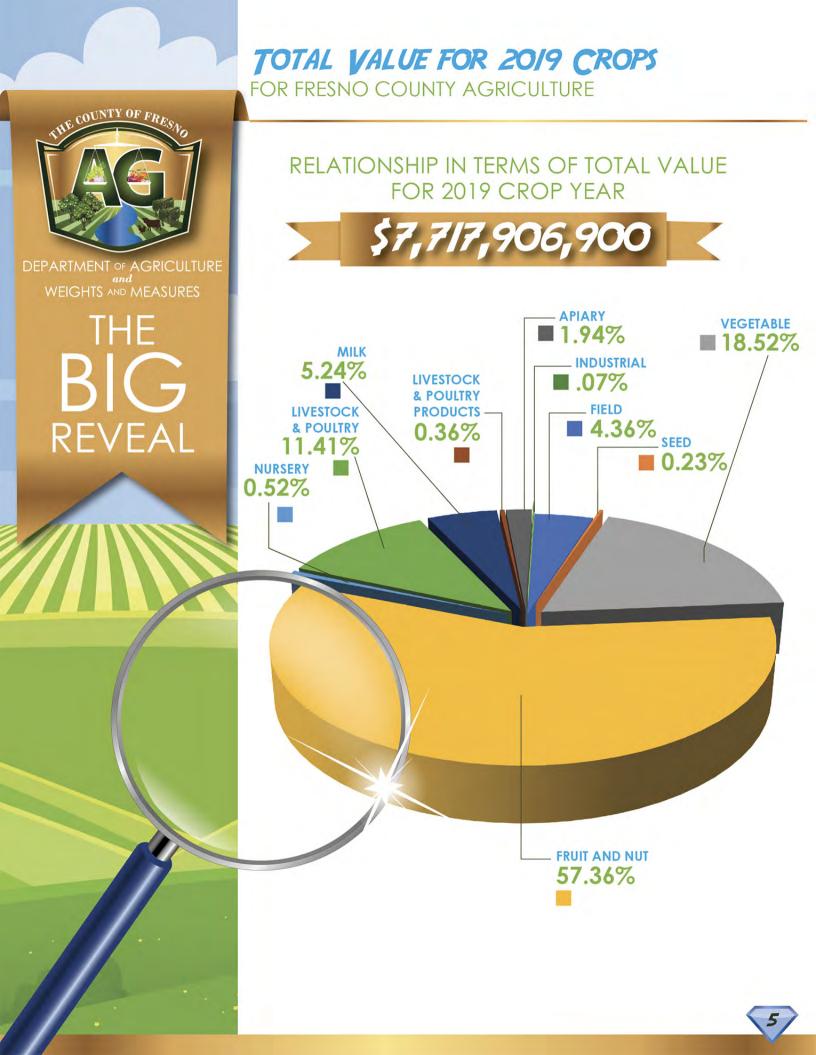
### 50 MILLION

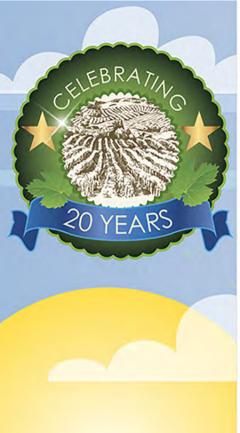
CORN



#### BY THE MILLION

FIGS	1
	,
RYE	/
SWISS CHARD	1
CELERY	1
WINTER FORAGE	1
GAILON	1
RADISH	1
APPLES	1
PECANS	1
OATS	1
BLACKBERRIES	1
RADICCHIO	1
YAM	1
OKRA	1
OPO	1
PEAS	1
SPINACH	1

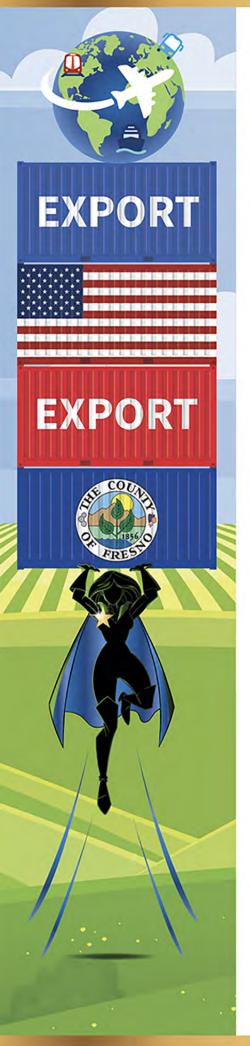




### GROWTH OVER 20 YEARS

FOR FRESNO COUNTY AGRICULTURE





### 2019 FRESNO COUNTY EXPORTS

#### SUPER WORTHY TO SHIP AROUND THE GLOBE!

In 2019, Fresno County Inspectors issued 17,796 Phytosanitary Certificates for 63 commodities destined for markets in 89 countries around the world. In addition, our inspectors walked and certified 1,406 acres of alfalfa, lettuce, radish, and onion grown for seed exports.





19.5%





**14.3%** 



GRAPES 8.8%



**8.6%** 





**8.4%** 



7.3%



6.4%



**4.4%** 



**4.1%** 







### PEST DETECTION & EXCLUSION PROGRAMS

#### **DEFENDING AGAINST PESTS**

Our Pest Detection and Exclusion Programs provide crucial lines of defense for Fresno County and California agriculture against invasive pests. These programs work in conjunction with each other to protect the environment, agriculture, and the economy. An invasive pest is any damaging animal, insect, plant, or plant disease that is not native to a specific area. Invasive pests are detrimental to local plants, crops, and other species. They cause economic damage by requiring increased pesticide use to crops and jeopardizing international trade.

These pests rapidly expand in population size, compete with native species for resources, and damage local ecosystems. Although we tend to think of invasive pests as pests damaging to agriculture, plants, or the environment, some invasive pests pose a risk to human and animal health. Invasive pests do not usually move to new areas on their own. People move invasive pests into new areas by moving infested plants, fruits, vegetables, grains, soil, animals, equipment, and even furniture.

#### THE MISSION OF PEST EXCLUSION

To keep exotic agricultural and environmental pests out of California and prevent or limit the spread of newly discovered pests within the state.

#### NOT AN EASY TASK, WHY?

- Pests reproduce rapidly
- They are often mobile
- Humans help transport them

### SO, HOW IS THIS MISSION ACHIEVED?

Laws and regulations exist to mitigate the risks and focus on the pathways of human activities. However, laws and regulations are worthless without enforcement.



### OUR FIRST LINE OF DEFENSE

#### PEST EXCLUSION

- At the State level, California has Border Inspection Stations that inspect commercial and passenger vehicles and vessels entering California borders for any prohibited or quarantined materials. If found, entry into California is denied, the shipment or articles are destroyed, or the articles are released under a Warning Notice for further inspection by the destination county.
- Fresno County also conducts numerous activities to exclude pests. These activities include package
  inspections at package carriers including the United States Post Office and UPS; incoming plant,
  plant product, and conveyance inspections; plant nursery and beehive inspections, and many more.
  If an invasive pest is intercepted, the conveyance or commodity is either returned to its origin, treated,
  or destroyed to eliminate the pest. These activities help prevent the introduction of invasive pests into
  Fresno County.

### OUR SECOND LINE OF DEFENSE

#### PEST DETECTION TRAPPING AND SPECIAL SURVEY PROGRAMS

The primary objectives of the Pest Detection Trapping and Special Survey Programs is to find:

- Insect pests before they infest one square mile
- Plant diseases before they exceed one-half of a square mile
- Vertebrate pests in the smallest area possible

The California Department of Food and Agriculture (CDFA) contracts with the Fresno County Department of Agriculture to deploy insect detection traps and conduct surveys. Funds for these activities come from The United States Department of Agriculture (USDA), CDFA, and your local tax dollars. Negative trapping or survey results are used to assure our domestic and international trading partners that export shipments from Fresno County are free of damaging agricultural pests. This enhances and expands the market for our local agricultural producers, which in turn benefits our local economy. Insects targeted for detection by the countywide network of traps include exotic fruit flies (particularly species of Bactrocera, Dacus, Ceratitis, Anastrepha), Japanese beetle, light brown apple moth, khapra beetle, gypsy moth, Asian citrus psyllid and European grapevine moth.

Special surveys are conducted to detect pest presence in crops as threats become apparent. Past surveys conducted in the county include surveys for red imported fire ant, Sudden Oak Death in nurseries, karnal bunt in wheat, and sweet orange scab in citrus plantings.



JAPANESE BEETLE



LIGHT APPLE BROWN MOTH



ASIAN CITRUS PSYLLID



GYPSY



MEDITERRANEAN FRUIT FLY



MELON FRUIT FLY



The goal of these programs is to prevent pest movement and hopefully eradicate the pest. Once an invasive pest has been detected, a quarantine area may be established to prevent the spread. A quarantine will generally restrict the movement of certain articles that are associated with how the pest could be moved. The Department enforces quarantine regulations and cooperates with the California Department of Food and Agriculture, which is usually the lead agency to eradicate the pest. The quarantine and detection trapping components work together to track the movement of the invasive pest. Enforcement of quarantine regulations complete the circle as pest exclusion activities occur outside of the quarantine area to prevent the movement of the invasive pest.

# INSECT TRAPPING PROGRAMS - WHY, WHO, WHAT, AND HOW

#### WHY DO OUR TRAPPING PROGRAMS EXIST?

The Pest Detection Program is designed to proactively detect, identify, and prevent the introduction and establishment of non-native, agricultural, and environmental detrimental pests in California and/or Fresno County. This program functions as an alliance between three cooperating agencies: the California Department of Food and Agriculture, the United States Department of Agriculture, and the County Agricultural Commissioner. The export of California agricultural products is important to the local economy. Detection trapping programs with negative trap results give assurance to our international trade partners that our agricultural products are free from invasive pest species.

#### WHO DO OUR PROGRAMS SERVE?

Early detection programs are beneficial to growers and consumers. By protecting our environment in limiting the need for increased pesticide applications for control or eradication efforts, it enables growers to provide consumers with an ample quantity of quality produce at affordable prices.

#### WHAT PESTS ARE WE TARGETING?

Our detection trapping programs currently target the following 11 high-priority, invasive pests: four fruit flies (Mediterranean, Mexican, Oriental, and melon); three moths (gypsy moth, light brown apple moth, and European grapevine moth); two beetles (Japanese beetle and khapra beetle); and two Hemipterans (Asian citrus psyllid and glassy-winged sharpshooter).



ORIENTAL FRUIT FLY



EUROPEAN GRAPEVINE MOTH



KHAPRA BEETLE



GLASSY WINGED SHARPSHOOTER



MEXICAN FRUIT FLY





#### WHEN ARE OUR PEST DETECTION PROGRAMS ACTIVE?

Most traps are maintained on a seasonal basis (April through October) while a few are maintained throughout the year. Each trap is serviced on a regular schedule with a frequency ranging from weekly to monthly.



#### HOW DO OUR PROGRAMS WORK?

The invasive pests currently tracked in our programs are specific to their preferred hosts, thus traps are placed accordingly. In the urban detection program, our county trappers place traps in trees or in the ground on a pole. The traps utilized in the program include a glass McPhail trap; white, yellow, or orange paper traps; or a green plastic insect trap. You might hear us knocking on your door to provide information about the program and asking permission to place a trap on your property. If you are not home, we'll leave a flyer with details on where the trap has been placed. Often, the traps are high in a tree so you may not see them. In general, we do not enter gated back yards, but we may place traps over fences using long extension poles. You can assist our program by not moving or damaging the traps.





### PACKAGE INSPECTIONS

High-Risk Pest Exclusion staff monitor the pathways where many invasive pests are introduced into the state. Shipments of packages from around the world come into Fresno County through the various ground and air package carriers. Department staff conduct inspections of these packages at package carriers such as FedEx and UPS. Department staff enforce agricultural quarantine laws and regulations pertaining to agricultural products. Packages in violation of quarantine laws and regulations, or ones that are found to be infested with pests are subject to destruction, treatment, or being returned to origin. This is how we keep invasive pests out of California and Fresno County.

Invasive pests must be eradicated if they become established in the environment. Eradication efforts are extremely expensive and not always successful. Quarantines that are established by our trading partners significantly reduce our ability to export our produce around the world.



verb (used with object)

- 1. To look carefully at or over; view closely and critically.
- 2. To view or examine formally or officially.

#### QUARANTINE

noun

A strict isolation imposed to prevent the spread of disease.

A period, originally 40 days, of detention or isolation imposed upon ships, persons, animals, or plants on arrival at a port or place, when suspected of carrying some infectious or contagious disease.

#### **ERADICATE**

verb (used with object)

To remove or destroy utterly; extirpate: and to exterminate.



### OUR DYNAMIC DUOS: DETECTION DOG TEAMS





Unmarked packages present a special challenge as there is no indication that the package contains plant material and could harbor an invasive pest. Department staff must use their knowledge and years of experience to detect these packages. The Department also utilizes two canine teams, our secret weapons, to detect plant material in unmarked packages. One of the teams is completely funded by the US Farm Bill. Handler Samantha Tomlinson and canine Soya were required to complete a 10-week training program at the USDA National Detector Dog Training Center in Georgia. The second team, handler Patricia Henke and canine Luna, is funded by pest exclusion programs.

The canine teams greatly enhance our ability to intercept and inspect plant material in unmarked packages. The canines alert on marked and unmarked packages that contain plant material. A biologist can then inspect the packages that the dogs have alerted on for any unwanted plant pests and diseases. Finds by our two dog teams have included many injurious pest species of ants, scales, and plant pathogens. In 2009, our canine team was responsible for marking on luggage from India that contained undeclared curry leaves found to have Asian Citrus Psyllid (ACP) nymphs. Subsequent testing by CDFA showed these nymphs tested positive for the dangerous Citrus Greening Disease (Huanglongbing). Our Dynamic Duo helped save our citrus industry from this destructive disease.

















### PHYTOSANITARY INSPECTIONS

To ensure export movement, our department's specialists inspect plants and plant products destined for foreign countries. We inspect to verify freedom from injurious or novel pests and diseases that we may have but are not present in other countries. Once a commodity intended for shipment has been inspected, Phytosanitary export certificates (phytos) are issued in accordance with destination country requirements. Domestically, plant health agencies in each of the 50 states regulate the shipment of agricultural commodities (including nursery and greenhouse stock) and other articles in an effort to minimize the spread of harmful insects and diseases. Our domestic and foreign Phytosanitary inspections help protect both our trade partners and our local economy by ensuring that export pathways remain open.



### \*THOROUGH EXAMINATION!





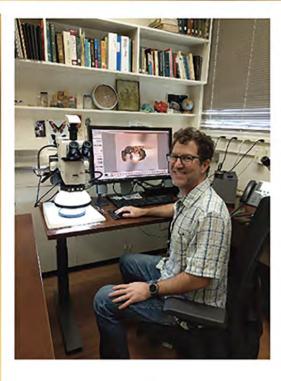
### ENTOMOLOGIST: DR. GENE HANNON

Gene Hannon came to the Fresno County Department of Agriculture by way of lowa with a few stops in between. During his summers in lowa, he did odd jobs at a local farm, including cleaning out barns. This experience proved valuable as it inspired his choice for his college senior paper 'Controlling House Fly Problems in Barns Using IPM'. In fact, it was this paper that inspired Gene to become an Entomologist! He then obtained his master's degree from San Francisco State University studying a rare damselfly; and later, his doctorate at Washington State University in Entomology. After graduating from WSU, he taught entomology courses at Cal Poly in San Luis Obispo, California. Next, he did a three-year post doc at the University of Arizona researching pink bollworms. Currently, besides being a full-time Entomologist with our department, Gene also teaches an introductory Biology lab for non-majors at the State Center Community College District.

As the Fresno County Entomologist, Gene collects and/or supervises the collection of insect specimens that he prepares and maintains for the Department's insect collections. These Department insect collections provide a valuable educational tool for the local community and industry. He performs insect identification for our insect detection trapping programs. He also provides information and assistance to Department staff, other agencies, and the general public on insect identification, control, taxonomy, and potential damage caused by insect pests. Gene also corresponds, confers, and acts as a liaison with personnel of other governmental agencies, the University of California, state universities, and the agricultural industry of Fresno County.



BOSS!



#### **ENTOMOLOGY**

noun

The branch of zoology dealing with insects.

#### ENTOMOLOGIST

nour

One who studies insects.

#### LIAISON

noun

One who maintains contact or a connection of communication between units or other organizations in order to ensure correct information is given, concerted action is taken and mutual cooperation can occur.



			PRODU	CTION			VALUE			
CROP	YEAR	HARVESTED ACREAG		TOTAL	UNIT	R	TOT	TAL		
CORN										
Silage	2019	23,840	19.29	460,000	ton	\$ 53.00°	\$	24,380,000		
	2018	24,410	19.66	480,000	ton	\$ 49.00 °	\$	23,520,000		
соттом										
Upland Lint	2019	2,420	1,212.00 b	5,870 °	bale	\$ 0.87 d	\$	2,574,000		
	2018	3,350	1,688.00 b	11,300 °	bale	\$ 0.88 d	\$	5,012,000		
Seed	2019			1,940	ton	\$ 325.00	\$	631,000		
	2018			4,070	ton	\$ 276.00	\$	1,123,000		
Pima Lint	2019	77,160	1,536.00 b	237,000 °	bale	\$ 1.15 d	\$	137,365,000		
	2018	65,740	1,857.00 ь	244,000 °	bale	\$ 1.26 d	\$	154,950,000		
Seed	2019			92,000	ton	\$ 280.00	\$	25,760,000		
	2018			94,900	ton	\$ 237.00	\$	22,491,000		
COTTON TOTAL	2019	79,580					\$	166,330,000		
	2018	69,090					\$	183,576,000		
HAY										
Alfalfa	2019	27,100	6.31	171,000	ton	\$ 186.00	\$	31,806,000		
	2018	32,122	7.32	235,000	ton	\$ 225.00	\$	52,875,000		
Wheat	2019	20,250	2.90	58,700	ton	\$ 150.00	\$	8,805,000		
	2018	17,680	3.49	61,700	ton	\$ 169.00	\$	10,427,000		
Other 1	2019	5,290	2.76	14,600	ton	\$ 144.00	\$	2,102,000		
	2018	9,960	0.80	7,970	ton	\$ 242.00	\$	1,929,000		



FIELD CROPS

			PRODUC	CTION				VALUE				
		HARVESTED	PER			PE	R					
CROP	YEAR	ACREAGE	ACRE	TOTAL	UNIT	UI	TIV	TO	TAL			
WHEAT												
Grain	2019	25,310	3.08	78,000	ton	\$	230.00	\$	17,940,000			
	2018	22,100	2.87	63,400	ton	\$	222.00	\$	14,075,000			
Silage	2019	13,042	11.55	151,000	ton	\$	51.00	\$	7,701,000			
	2018	15,860	10.28	163,000	ton	\$	53.00	\$	8,639,000			
OTHER 9	2019	884,330						\$	77,578,000			
	2018	887,080						\$	47,401,000			
TOTAL	2019	1,078,700						\$	336,642,000			
	2018	1,078,300			·			\$	342,442,000			

- a Field price
- b Pounds of lint per acre
- c 500 pounds lint per bale
- d Price per pound, 504 pounds gross weight per bale
- e Does not include cotton seed for planting
- f Includes hay from: oats, sudan grass, triticale and winter forage
- g Includes alfalfa (silage), beans (dried), field stubble (includes acres not included in total field crop acreage), oat (grain and silage), rangeland, rice (grain and bran), rye (silage), sorghum (silage and grain), sudangrass (silage), straw, triticale (forage and grain), winter forage silage, ORGANIC: corn silage, rice grain, wheat (grain, hay and silage)



SEED CROPS

			PRODI	UCTION				VALUE				
		HARVESTED	PER			PER						
CROP	YEAR	ACREAGE	ACR	E TOTAL	UNIT	UNIT		TOT	AL			
ALFALFA	2019	3,080	459	1,414,000	lb	\$	3.05	\$	4,313,000			
Certified	2018	4,720	657	3,101,000	lb	\$	3.25	\$	10,078,000			
VEGETABLE °	2019	1,880						\$	11,507,000			
	2018	1,560						\$	24,285,000			
OTHER b	2019	1,720						\$	2,216,000			
	2018	2,010						\$	2,856,000			
TOTAL	2019	6,680						\$	18,036,000			
1/2 21/12	2018	8,290						\$	37,219,000			

a Broccoli, lettuce (head & leaf), mustard, onion, radish, and sesame



b Alfalfa non-certified, cotton non-certified and wheat

VEGETABLE CROPS

			PRODUC	CTION			VALUE				
CROP	YEAR	HARVESTED ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TO	ΓAL			
ASPARAGUS	2019	813	3.05	2,480	ton	\$ 3,509.00	\$	8,702,000			
	2018	710	2.30	1,630	ton	\$ 2,992.00	\$	4,877,000			
CORN, SWEET	2019	6,690	8.21	54,900	ton	\$ 496.00	\$	27,230,000			
	2018	6,090	10.51	64,000	ton	\$ 438.00	\$	28,032,000			
EGGPLANT <sup>a</sup>	2019	890	11.72	10,400	ton	\$ 909.00	\$	9,454,000			
	2018	760	12.28	9,330	ton	\$ 785.00	\$	7,324,000			
GARLIC											
Fresh/Processed	2019	24,180	6.87	166,000	ton	\$ 2,201.00	\$	365,366,000			
	2018	25,280	8.04	203,000	ton	\$ 2,136.00	\$	433,608,000			
HEAD LETTUCE											
Naked				9,100	ton						
Wrapped				38,100	ton						
Bulk				8,900	ton						
SPRING	2019	3,100	18.10	56,100	ton	\$ 410.00	\$	23,001,000			
SEASON TOTAL	2018	3,510	16.81	59,000	ton	\$ 364.00	\$	21,476,000			
Naked				9,500	ton						
Wrapped				43,400	ton						
Bulk				28,300	ton						
FALL	2019	4,900	16.57	81,200	ton	\$ 500.00	\$	40,600,000			
SEASON TOTAL	2018	3,950	16.73	66,100	ton	\$ 532.00	\$	35,165,000			
HEAD LETTUCE	2019	8,000	137,300				\$	63,601,000			
TOTALS	2018	7,460	125,100				\$	56,641,000			
LETTUCE LEAF b	2019	4,080	17.67	72,100	ton	\$1,350.00	\$	97,335,000			
	2018	4,040	15.42	62,300	ton	\$ 500.00	\$	31,150,000			



VEGETABLE CROPS

			PRODU	RODUCTION VAL					LUE
CROP	YEAR	HARVESTED ACREAGE	PER ACRE	TOTAL	UNIT	PE	R	TOI	'AL
MELONS									
Conventiona	& Org	anic							
Cantaloupe of	2019	9,470	20.70	196,000	ton	\$	328.00	\$	64,288,000
*********	2018	13,500	17.41	235,000	ton	\$	331.00	\$	77,785,000
Honeydew c	2019	7,620	15.49	118,000	ton	\$	474.00	\$	55,932,000
	2018	4,470	18.12	81,000	ton	\$	448.00	\$	36,288,000
Mixed Melons	2019	2,320	12.97	30,100	ton	\$	531.00	\$	15,983,000
	2018	3,660	11.53	42,200	ton	\$	661.00	\$	27,894,000
Watermelon	2019	2,820	23.12	65,200	ton	\$	881.00	\$	57,441,000
	2018	1,180	26.44	31,200	ton	\$	434.00	\$	13,541,000
Melon Total	2019	22,230		100				\$	193,644,000
	2018	22,810						\$	155,508,000
ONIONS									
Fresh/Processed	2019	17,980	17.19	309,000	ton	\$	575.00	\$	177,675,000
	2018	18,980	23.39	444,000	ton	\$	830.00	\$	368,520,000
ORIENTAL	2019	1,887		21,825	ton			\$	25,747,000
VEGETABLES d	2018	1,118		10,300	ton			\$	17,108,000
PEPPER, BELL c	2019	1,720	20.81	35,800	ton	\$	779.00	\$	27,888,000
	2018	1,680	23.33	39,200	ton	\$	455.00	\$	17,836,000
PEPPER, CHILI °	2019	1,740	14.32	24,900	ton	\$	800.00	\$	19,920,000
+	2018				ton	\$		\$	
SQUASH °	2019	1,570	10.97	17,200	ton	\$	859.00	\$	14,775,000
	2018	727	10.07	7,320	ton	\$	659.00	\$	4,824,000
TOMATOES	23.22.22	2000		TA SECTION			a de Sa		via rigolacione
Standard	2019	5,350	24.59	132,000	ton	\$	165.00	\$	21,780,000
& Cherry	2018	6,620	24.17	160,000	ton	\$	102.00	\$	16,320,000
Processed	2019	74,800	52.10	3,897,000	ton	\$	73.00	\$	284,481,000
	2018	77,140	56.49	4,358,000	ton	\$	68.00	\$	296,344,000
TOMATOES TOTAL	2019	79,090						\$	306,261,000
	2018	83,760						\$	312,664,000

**VEGETABLE CROPS** 

			VALUE					
	1	HARVESTED	PER			PER		
CROP	YEAR	ACREAGE	ACRE	TOTAL	UNIT	UNIT	TOT	AL
OTHER <sup>f</sup>	2019	12,800					\$	91,405,000
	2018	13,054					\$	94,938,000
TOTAL	2019	184,730					\$ 1	,429,003,000
	2018	186,469			· · · · · · · · · · · · · · · · · · ·			,533,030,000

- a Includes assorted varieties
- b Includes Red, Green, Butter, and Romaine varieties
- c Includes fresh and processed
- d Includes a choy, amaranth, bamboo, bitter melon (fruit and leaf), bok choy, chayote (fruit and leaf), curry leaf tree, daikon, doan qua, gai choy, gailon, galangal, ginger (root & leaf), lambsquarter, lemon grass, lo bok, malabar, mizuna, methi, moqua, mora, moringa (fruit and leaf), nagaimo, napa cabbage, ong choy, opo (fresh and leaf), saluyote, sinqua, sour leaf, soybean, sugar cane, taro (root and leaf), tatsoi, tong ho, yam (root and leaves), yu choy and white leadtree
- e Includes summer and winter varieties
- Includes arugula, artichoke, basil, beans (shell & snap), beets, broccoli, cabbage, carrot (fresh & processed), casava (root & leaf), cauliflower, celery, chamomile, chive, cilantro, culantro, collards, corn (processed), cucumber, dandelion green, dill, fennel, gourds, jicama, kale (fresh & processed), kohlrabi, lavender, leeks, marjoram, mint, mushroom, mustard (fresh & leaf), nettle, okra, green onion, oregano, parsley (fresh & dried), parsnip, peanut, peas (pod & leaf), pennywort, chili pepper (leaf), potato, pumpkin (fresh and and processed), purslane, radicchio, radish, rapini, rhubarb, rosemary, rutabaga, sage, savory, sesbania javanica, shallot, spinach, sunchoke, swiss chard, tarragon, thyme, tomatillo, tumeric, turnip, watercress; ORGANIC: bean (shell & snap), broccoli, sweet corn, eggplant, garlic, melon (cantaloupe, honeydew & mixed), mint, onion, tomato (processed & standard), watermelon
- Revised
- Not previously reported in this format



			PRODUC	CTION			VAL	.UE
	1	HARVESTED	PER			PER		
CROP	YEAR	ACREAGE	ACRE	TOTAL	UNIT	UNIT	TOT	AL
ALMONDS °	2019	264,123	1.17	309,000	ton	\$4,930.00	\$1	,523,370,000
	2018	250,042	0.96	240,000	ton	\$4,626.00	\$1	,110,240,000
ALMOND HULLS	2019			481,000	ton	\$ 105.00	\$	50,505,000
	2018			543,000	ton	\$ 109.00	\$	59,187,000
ALMOND TOTAL	2019						\$1	,573,875,000
	2018						\$1	,169,427,000
APRICOTS °	2019	1,324	6.93	9,180	ton	\$1,742.00	\$	15,992,000
	2018	1,256	6.00	7,540	ton	\$2,220.00	\$	16,739,000
BLUEBERRIES a	2019	1,524	4.00	6,100	ton	\$5,359.00	\$	32,690,000
	2018	1,316	3.55	4,670	ton	\$6,805.00	\$	31,779,000
CHERRIES °	2019	4,736	2.72	12,900	ton	\$2,716.00	\$	35,036,000
	2018	4,122	2.16	13,500	ton	\$3,389.00	\$	37,211,000

			PRODUC	CTION				VA	LUE
CROP	YEAR	HARVESTED ACREAGE	PER ACRE	TOTAL	UNIT	P E	R NIT	TOI	<b>TAL</b>
CITRUS									
LEMONS °									
Fresh	2019	3,229	16.83	54,300	ton	\$	874.00	\$	47,458,000
	2018	2,819	15.15	42,700	ton	\$	806.00	\$	34,416,000
ORANGES									
Navel °	2019	29,439	14.50						
	2018	24,705	14.58						
Fresh	2019			354,000	ton	\$	567.00	\$	200,718,000
	2018			281,000	ton	\$	658.00	\$	184,898,000
Processed	2019			73,000	ton	\$	53.00	\$	3,869,000
	2018			78,400	ton	\$	155.00	\$	12,152,000
Valencia	2019	2,522	17.01						
	2018	2,453	8.97						
Fresh	2019			36,900	ton	\$	711.00	\$	26,236,000
	2018			14,600	ton	\$	988.00	\$	14,425,000
Processed	2019			6,000	ton	\$	32.00	\$	192,000
	2018			7,400	ton	\$	88.00	\$	651,000
ORANGE TOTAL	2019	31,961						\$	231,015,000
	2018	27,158						\$	
MANDARIN/	2019	23,249	7.57	176,000	ton	\$1	,360.00	\$	239,360,000
TANGERINE °	2018	24,230	6.15	149,000	ton	\$1	,544.00	\$	230,056,000
CITRUS, OTHER b									
Fresh	2019	1,910	17.85	34,100	ton	\$	507.00	\$	17,289,000
	2018	2,119	13.12	27,800	ton	\$	658.00	\$	18,292,000
CITRUS TOTAL	2019	60,349						\$	535,122,000
	2018	56,326						\$	494,890,000

			PRODU	CTION			VALUE
CROP	YEAR	HARVESTED ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
GRAPES							
RAISIN	2019	81,848	10.82				
Varieties a	2018	80,024	10.18				
Crushed	2019			107,600	ton	\$ 253.00	\$ 27,223,000
	2018			114,000	ton	\$ 329.00	\$ 37,506,000
Dried	2019			162,000 c	ton	\$1,488.00	\$ 241,056,000
	2018			146,000 °	ton	\$2,150.00	\$ 313,900,000
Fresh	2019			14,400	ton	\$1,163.00	\$ 16,747,000
	2018			12,500	ton	\$1,053.00	\$ 13,163,000
Juice	2019			2,025	ton	\$ 889.00	\$ 1,800,000
	2018			1,620	ton	\$ 861.00	\$ 1,395,000
TABLE	2019	29,164	11.53				
Varieties	2018	28,500	13.56				
Crushed	2019			13,900	ton	\$ 263.00	\$ 3,656,000
	2018			11,500	ton	\$ 297.00	\$ 3,416,000
Fresh	2019			317,000	ton	\$1,296.00	\$ 410,832,000
	2018			310,000	ton	\$1,322.00	\$ 409,820,000
Dried	2019			1,160 c	ton	\$1,453.00	\$ 1,685,000
	2018			13,800 c	ton	\$1,827.00	\$ 25,213,000
WINE	2019	53,537	13.85				
Varieties °	2018	59,514	12.93				
Crushed	2019			699,000	ton	\$ 300.00	\$ 209,700,000
	2018			711,000	ton	\$ 317.00	\$ 225,387,000
Juice	2019			41,000	ton	\$1,087.00	\$ 44,600,000
	2018			58,400	ton	\$1,054.00	\$ 61,554,000
GRAPE TOTAL	2019	164,549					\$ 957,299,000
	2018	168,038					\$ 1,091,354,000





				VALUE				
CROP	YEAR	HARVESTED ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOT	ΓAL
NECTARINES °	2019	9,985	10.12	101,000	ton	\$1,260.00	\$	127,260,000
	2018	9,532	11.75	112,000	ton	\$1,291.00	\$	144,592,000
PEACHES						1		
Cling (processed) a	2019	1,915	20.57	39,400	ton	\$ 485.00	\$	19,109,000
	2018	1,552	14.83	23,000	ton	\$ 508.00	\$	11,684,000
Freestone (fresh) a	2019	15,970	9.45	151,000	ton	\$1,158.00	\$	174,858,000
	2018	14,594	10.62	155,000	ton	\$1,354.00	\$	209,870,000
PEACHES TOTAL	2019	17,885					\$	193,967,000
	2018	16,146					\$	221,554,000
PEARS, ALL °	2019	722	15.79	11,400	ton	\$1,253.00	\$	14,284,000
	2018	784	13.27	10,400	ton	\$1,647.00	\$	17,129,000
PERSIMMONS	2019	1,033	7.48	7,730	ton	\$ 862.00	\$	6,663,000
	2018	1,011	6.23	6,300	ton	\$1,136.00	\$	7,157,000
PISTACHIOS °	2019	117,519	1.36	160,000	ton	\$4,129.00	\$	660,640,000
	2018	109,633	1.95	214,000	ton	\$4,005.00	\$	857,070,000
PLUMS °	2019	10,886	8.76	95,400	ton	\$ 1,186.00	\$	113,144,000
	2018	10,890	7.58	82,600	ton	\$ 1,244.00	\$	102,754,000
PLUMS, DRIED a	2019	1,220	4.83	5,890	ton	\$2,101.00	\$	12,375,000
	2018	1,212	1.74	2,110	ton	\$1,757.00	\$	3,707,000
PLUOTS a, d	2019	1,396	10.53	14,700	ton	\$1,418.00	\$	20,845,000
	2018	1,410	4.15	5,850	ton	\$1,215.00	\$	7,108,000





		PRODUCTION						VALUE	
CROP	YEAR	HARVESTED ACREAGE	PER ACRE	TOTAL	UNIT	PE		TOT	A1
CKOI	ILAK	ACKLAGE	EAGE ACKE		OIVII	UNIT		TOTAL	
POMEGRANATES	2019	4,536	6.37	28,900	ton	\$	782.00	\$	22,600,000
	2018	3,561	10.45	37,200	ton	\$	963.00	\$	35,824,000
WALNUTS <sup>a</sup>	2019	10,056	1.88	18,900		\$2	,044.00	\$	38,632,000
	2018	9,008	1.71	15,400		\$1	,299.00	\$	20,005,000
OTHER *	2019	8,480						\$	66,249,000
	2018	18,030						\$	99,661,000
TOTAL	2019	680,323						\$4	,426,673,000
	2018	662,317						\$4	,357,961,000

- a Additional acreage that is included in other fruit and nut crops: 115 apricots (dried), 127 acres raisin grapes (processed), 351 acres wine grapes (fresh), 193 acres peaches freestone (processed), 71 peaches cling (fresh); ORGANIC: 335 acres almonds, 4.5 apples, 20 acres apricots, 5 acres blueberries, 2 acres cherries, 260 acres table grapes (dried & crushed), 9 acres mandarins (fresh), 190 acres nectarines, 1,075 acres navel oranges (fresh), 251 acres valencia oranges (fresh), 264 acres peaches freestone (fresh), 74 acres peaches cling (processed), 1.17 acres pears, 4.25 acres persimmons, 124 acres plums (fresh), 4.25 acres pluots, 119 acres pomegranates (fresh & processed), 140 acres walnuts
- b Includes citron, lime, grapefruit, pomelo and tangelo
- c Tonage is reported as dried tons
- d Includes pluot, plumcot or other interspecific varieties acres; conventional and organic
- e Includes almonds (shells, inedibles), apples (fresh, processed), apricots (juice and dried), avocado, blackberries, dates, figs (fresh, dried and substandard), grape raisin (processed and by-products), grape wine (fresh), guava, jujubes, kumquats, lemons (processed), loquat, mandarins (processed), mulberry, olives (oil and canned), other citrus (processed), peach (freestone-processed and cling-fresh), pecans, quince, raspberries and strawberries; ORGANIC: almonds (meats and hulls), apples, apricots, blueberries, cherries, figs (fresh), grape table (dried & crushed), mandarins, nectarines, olives, orange navel (fresh), orange valencia, peaches freestone (fresh, processed), peaches cling (processed), pears, persimmons, plums (fresh), pluots, pomegranates (fresh), walnuts



**NURSERY PRODUCTS** 

CROP	YEAR	QUANTITY	PER UNIT	VAL	UE
HERBACEOUS	2019	870,000	b	\$	4,121,000
ORNAMENTALS °	2018	691,000	b	\$	5,839,000
ORNAMENTAL TREES	2019	6,104,000	plants	\$	12,863,000
	2018	1,397,000	plants	\$	12,011,000
OTHER <sup>c</sup>	2019	243,866,000	units	\$	22,893,000
	2018	398,849,000	units	\$	33,211,000
TOTAL	2019			\$	39,877,000
	2018			\$	51,061,000

- a Includes aquatic plants, potted plants, bedding plants, decorative plants, flats, annuals, succulents, perennials and grasses
- b Includes flats, dozens, cans, seedlings and single plants and trees
- b Includes bareroot fruit trees, Christmas trees, citrus (budwood and trees), grape (rootings and cuttings), trees-restoration stock (seedlings), turf (in square feet), and vegetable transplants



LIVESTOCK AND POULTRY

			PRODUCTION			VALUE
ITEM	YEAR	NO. OF HEAD	TOTAL LIVEWEIGHT	UNIT	PER UNIT	TOTAL
CATTLE AND CA	LVES					
BEEF						
<b>Breeding Sto</b>	ck					
Common	2019	1,200		head	\$1,876.00	\$ 2,251,000
	2018	1,240		head	\$1,680.00	\$ 2,083,000
Registered	2019	300		head	\$4,450.00	\$ 1,335,000
	2018	310		head	\$6,418.00	\$ 1,990,000
Feeders	2019	26,700	138,000	cwt	\$ 125.00	\$ 17,250,000
	2018	27,500	141,000	cwt	\$ 125.00	\$ 17,625,000
Calves	2019	26,700	80,000	cwt	\$ 147.23	\$ 11,778,000
	2018	27,500	82,600	cwt	\$ 146.76	\$ 12,122,000
Slaughter S	Stock					
	2019	258,000	1,199,000 a	cwt	\$ 117.01	\$ 140,300,000
	2018	309,000	1,460,000 °	cwt	\$ 117.52	\$ 171,579,000
DAIRY						
<b>Breeding Sto</b>	ck					
	2019	99,100		head	\$1,206.00	\$ 119,515,000
	2018	99,100		head	\$1,248.00	\$ 123,677,000
Feeders	2019	51,500	290,000	cwt	\$ 70.43	\$ 20,425,000
	2018	60,800	328,000	cwt	\$ 80.52	\$ 26,411,000
Calves	2019	55,700	167,000	cwt	\$ 78.20	\$ 13,059,000
	2018	65,900	198,000	cwt	\$ 48.38	\$ 9,579,000
<b>Cull Stock</b>	2019	29,800	387,000	cwt	\$ 59.77	\$ 21,131,000
	2018	35,200	457,000	cwt	\$ 59.45	\$ 27,169,000
CATTLE AND						A 0/000
CALVES	2019	-				\$ 349,044,000
TOTAL	2018					\$ 392,235,000





LIVESTOCK AND POULTRY

		PRODUCTION			VALUE			
ITEM	YEAR	NO. OF HEAD	TOTAL LIVEWEIGHT	PER UNIT UNIT		TOTAL		
HOGS AND PIGS								
Market Pigs	2019	41,370	103,000	cwt	\$ 87.14	\$ 8,975,000		
Slaughter Stock	2018	39,000	96,800	cwt	\$ 117.24	\$ 11,349,000		
SHEEP AND LAMB	s							
Slaughter Sto	ck							
Lambs	2019	68,500	87,700	cwt	\$ 190.00	\$ 16,663,000		
	2018	71,000	90,900	cwt	\$ 172.00	\$ 15,635,000		
Sheep	2019	8,030	12,900	cwt	\$ 96.00	\$ 1,238,000		
	2018	8,320	13,300	cwt	\$ 139.46	\$ 1,855,000		
POULTRY AND	2019					\$ 504,951,000		
MISC. OTHER b	2018					\$ 568,838,000		
TOTAL	2019					\$ 880,871,000		
	2018					\$ 989,912,000		

a Net gain

b Includes chickens, ducks, fish, gamebirds (guinea hen, pheasant, pigeon and quail); geese, goats, insects (beneficial); and turkeys



### LIVESTOCK AND POULTRY PRODUCTS

			VALUE				
ITEM	YEAR	NO. OF HEAD	TOTAL LIVEWEIGHT	UNIT	PER UNIT		TOTAL
MANURE °	2019		1,834,000	ton	4.55	\$	8,345,000
	2018		1,887,000	ton	9.38	\$	17,700,000
MILK b							
	2019		24,113,000	cwt	16.76	\$	404,134,000
	2018		26,956,000	cwt	15.42	\$	415,812,000
OTHER °	2019					\$	19,337,000
	2018					\$	29,290,000
TOTAL							
	2019					\$	431,816,000
	2018					\$	462,802,000

a Includes cow and poultry manure

b Includes cow milk (conventional and organic) and goat milk

c Includes duck, and turkey commercial and hatching eggs, and wool







### APIARY PRODUCTS AND POLLINATION SERVICES

PRODUCTION VALUE

		NO. OF	TOTAL		PER	
ITEM	YEAR	HEAD	LIVEWEIGHT	UNIT	UNIT	TOTAL
APIARY PRODUC	TS					
Honey	2019		7,509,000	lb	5.16	\$ 38,746,000
	2018		3,835,000	lb	4.02	\$ 15,417,000
Beeswax	2019		165,000	lb	3.07	\$ 507,000
	2018		158,000	lb	3.65	\$ 577,000
POLLINATION °						
Seed b	2019					\$ 650,000
	2018					\$ 827,000
Trees, Fruit	2019					\$ 107,371,000
and Nut c	2018					\$ 100,775,000
Melon d	2019					\$ 1,741,000
	2018					\$ 4,317,000
Vegetable	e 2019					\$ 420,000
	2018					\$ 228,000
TOTAL	2019					\$ 149,435,000
	2018					\$ 122,141,000

- a Reflects value of pollination by all bee colonies located in Fresno County for pollination services during 2019
- b Alfalfa, lettuce, onion and miscellaneous vegetable crops
- c Almond, apple, blackberry, blueberry, cherry, kiwifruit, pear, plum, pluot, pomegranate and prune
- d Cantaloupe, honeydew, watermelons and mixed melons
- e Bell pepper, cucumber, chili pepper, pumpkin, and squash



INDUSTRIAL CROPS

		PRODUCTION			VALUE				
ITEM	YEAR	NO. OF HEAD	TOTAL LIVEWEIGHT	UNIT	PER UNIT		TOTAL		
TIMBER °	2019		40,119,000	b	oard feet	\$	1,396,000		
	2018		284,826,000	b	ooard feet	\$	2,077,000		
FIREWOOD	2019		2,250		cord	\$	14,900		
	2018		1,130		cord	\$	5,790		
OTHER b	2019					\$	4,143,000		
	2018					\$	1,814,000		
TOTAL	2019					\$	5,553,900		
	2018					\$	3,896,790		

a Includes government and non-government properties

b Includes bark, biomass, compost, ground cover, limbs/boughs, mulch, poles, pomace and wood fines



#### SUSTAINABLE AGRICULTURE

#### 2019 BIOLOGICAL CONTROL ACTIVITIES

PEST	B.C. AGENT/MECHANISM	ACTIVITY
Glassy-winged sharpshooter, Homalodisca vitripennis	- Cosmocomoidea ashmeadi - Cosmocomoidea morgani - Cosmocomoidea morilli - Ufens spp.	CDFA released parasitoids species and monitored for evidence GWSS egg parasitism

#### 2019 DETECTION ACTIVITIES

INSECT	TRAPS DEPLOYED	RESULTS
European Grapevine Moth, Lobesia botrana	7,617	0
Glassy-winged sharpshooter, Homalodisca vitripennis	3,306	Multiple residential/commercia captures (properties treated)
Asian citrus psyllid, Diaphorina citri	3,133	1 capture
Light brown apple moth, Epiphyas postvittana	694	0
Mediterranean fruit fly, Ceratitis capitata	695	0
Gypsy moth, Lymantria dispar	483	0
Oriental fruit fly, Bactrocera dorsalis	690	0
Melon fruit fly, Bactrocera cucurbitae	375	0
Japanese beetle, Popillia japonica	338	0
Apple maggot, Rhagoletis pomonella	20	0
Western cherry fruit fly, Rhagoletis indifferens	20	0



#### SUSTAINABLE AGRICULTURE

#### 2019 BIOLOGICAL CONTROL ACTIVITIES

PEST	ACTIVITY	RESULTS
Glassy-winged sharpshooter	4,768 - Bulk Citrus Inspections	0 Finds

#### 2019 PEST ERADICATION / MANAGEMENT ACTIVITIES

#### **ERADICATION**

Rush Skeletonweed 350 acres surveyed

21 acres infested

0.75 net acres treated

69,615 cotton acres

0 Plowdown non-compliance

#### **MANAGEMENT**

Pink Bollworm

Perennial Pepperweed 540 acres surveyed / 105 acres infested

2.5 net acres treated

Glassy-winged sharpshooter 3,813 properties treated





# TO THE "TRUE" SUPER HEROES OF ALL FRESHO COUNTY FARMLAND

WE AT THE ...

### FRESNO COUNTY DEPARTMENT OF AGRICULTURE

want to extend a big, heartfelt THANK YOU to all of our growers, associated industries, and especially to those that responded to our Crop Report survey.

This report would not be possible without all of your hard work and the data you kindly share.

THANK YOU!



DEPARTMENT OF AGRICULTURE and WEIGHTS AND MEASURES