CULTIVATING RESILIENCE

ZOZS STANISLAUS COUNTY AGRICULTURAL REPORT

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2023 STANISLAUS COUNTY AGRICULTURAL REPORT

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DEPARTMENT OF AGRICULTURE & WEIGHTS AND MEASURES

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David J. Singh ASSISTANT AGRICULTURAL COMMISSIONER/ SEALER OF WEIGHTS AND MEASURES

Karen Ross, Secretary California Department of Food and Agriculture

and

The Honorable Board of Supervisors of Stanislaus County

Buck Condit District 1, Vice-Chairman Vito Chiesa District 2 Terry Withrow..... District 3 Mani Grewal District 4, Chairman Channce Condit District 5

It is my pleasure to present the 2023 Agricultural Report for Stanislaus County pursuant to Sections 2272 and 2279 of the California Food and Agricultural Code. Stanislaus County's total gross value of agricultural production in 2023 was \$3,366,082,000, decreasing from 2022 by nearly 10%. It is important to note that the agricultural gross values in this report only provide farm gate values and do not represent net profits or losses, as it does not account for production costs. This report also does not account for re-spending and support multipliers generated by agricultural production in the local economy.

The top three commodities for 2023 returned to more historical placements. Market improvements increased almond value 8% to \$813 million, returning almonds to the top valued position, superseding milk. Milk decreased in value nearly 33% from 2022, bringing it back under a billion dollars to \$762 million. With a modest 4% increase in poultry values to nearly \$400 million, these three commodities represent nearly 60% of County agricultural value. Walnuts returned to the top ten after a year hiatus, increasing in value 30% with some market recovery, better quality and acreage removed. Excellent tomato prices encouraged growers to plant over 1,700 more acres of tomatoes than 2022, moving the commodity further up the top commodities list to number seven. A relief to livestock ranchers, most hays and silages returned closer to historical values, decreasing by their category by 27%. Organic products have been broken up into their respective categories this year, providing better insight to what types of commodities are most frequently grown organically.

Our theme, Cultivating Resiliency, is apparent in this year's report. Despite numerous drops in value throughout various categories in 2023, we are confident agriculture will persist as the crown jewel of Stanislaus County's economy. Commodity prices, inclement weather, drought, fire, flooding, insects, and diseases are all part of the intricacies of agricultural production. Despite these hurdles, farmers and ranchers are deservedly known as eternal optimists, tenacious, and always seeking ways to overcome and try again the next season.

I wish to express my sincere gratitude and appreciation to the agricultural producers, industry representatives, and public agencies who contributed data necessary to prepare this report. I also thank my team who made the publication of this report possible through their hard work, dedication, and diligence.

Respectfully submitted,

Linda Pinfold Agricultural Commissioner Sealer of Weights and Measures

WE BUILD COMMUNITY

TOP TEN COMMODITIES



CATEGORY	% of 2023 VALUE	2023 VALUE	2022 VALUE
ALMONDS, ALL	24%	\$813,444,000	\$752,971,000
MILK, ALL	23%	\$761,529,000	\$1,130,572,000
POULTRY, ALL	12%	\$399,855,000	\$383,168,000
CATTLE & CALVES, ALL	6%	\$208,749,000	\$192,802,000
FRUIT & NUT NURSERY STOCK	4%	\$146,328,000	\$175,035,000
SILAGE, ALL	4%	\$121,373,000	\$173,025,000
TOMATOES, ALL	3%	\$107,111,000	\$53,478,000
POLLINATION, ALMOND	2%	\$83,636,000	\$87,401,000
WALNUTS	2%	\$55,509,000	\$42,729,000
EGGS, ALL	2%	\$54,335,000	\$84,198,000
TOTAL TOP TEN	82%	\$2,751,869,000	\$3,075,379,000
ALL OTHER COMMODITIES	18%	\$614,213,000	\$651,103,000

2023 STANISLAUS COUNTY AGRICULTURAL REPORT

2023		2022							
APIARY \$99,844,000		APIARY \$107,907,000							
FIELD CROPS \$200,498,000		FIELD CROPS \$273,149,000							
FRUIT & NUT CROPS \$1,056,480,000	M	FRUIT & NUT CROPS \$962,169,000							
LIVESTOCK & POULTRY \$662,659,000		LIVESTOCK & POULTRY \$584,393,000							
LIVESTOCK & POULTRY PRODUCTS \$823,099,000	WILK	LIVESTOCK & POULTRY PRODUCTS \$1,222,566,000							
NURSERY PRODUCTS \$207,910,000		NURSERY PRODUCTS \$242,995,000							
OTHER AGRICULTURE \$29,921,000		OTHER AGRICULTURE \$35,933,000							
VEGETABLE CROPS \$285,671,000		VEGETABLE CROPS \$216,170,000							
ORGANIC INCLUDED ABOVE		ORGANIC PRODUCTS \$81,200,000							
TOTAL \$3,366,082,000	\$\$\$ www.stanag.of	\$3,726,482,000 TOTAL							

SUMMARY



CATEGORY	YEAR	HARVESTED ACRES	YIELD PER ACRE	YIELD TOTAL	UNIT	VALUE PER UNIT	TOTAL VALUE
Beans,	2023	2,945					\$10,184,000
Dried All	2022	2,978					\$7,001,000
	2023	2,743					\$9,948,000
Limas, Ali -	2022	2,770					\$6,519,000
Beans,	2023	203					\$236,000
Dried Other ²	2022	49					\$482,000
	2023	45,509					\$42,880,000
ndy, Ali	2022	44,823					\$68,109,000
Hay Alfalfa	2023	12,734	6.85	87,231	TON	\$235.42	\$20,536,000
ndy, Alfalfa	2022	12,341	7.78	96,012	TON	\$360.70	\$34,632,000
Hay Oat	2023	23,790	3.62	86,119	TON	\$182.70	\$15,734,000
ndy, Odi	2022	23,400	4.06	95,003	TON	\$256.39	\$24,358,000
Hay M/beat	2023	8,169	4.85	39,621	TON	\$155.31	\$6,153,000
ndy, vinedi	2022	8,374	3.61	30,230	TON	\$280.36	\$8,475,000
Lieu Other ³	2023	815					\$456,000
Hay, Other ⁵	2022	709					\$645,000
Pasture,	2023	24,085			ACRE	\$318.89	\$7,587,000
Irrigated ⁴	2022	23,111			ACRE	\$314.71	\$7,271,000



FIELD CROPS - CONTINUED

CATEGORY	YEAR	HARVESTED ACRES	YIELD PER ACRE	YIELD TOTAL	UNIT	VALUE PER UNIT	TOTAL VALUE
Denceland	2023	399,057			ACRE	\$37.83	\$15,096,000
Rangeland	2022	399,057			ACRE	\$34.50	\$13,767,000
	2023	202			ACRE		\$378,000
Seed Crops	2022	172			ACRE		\$334,000
Silago All	2023	104,835					\$121,373,000
Slidge, All	2022	103,731					\$173,025,000
Silago Corp	2023	54,088	26.30	1,422,508	TON	\$56.09	\$79,788,000
Slidge, Com	2022	53,931	25.69	1,385,480	TON	\$91.41	\$126,647,000
Silago Oat	2023	9,717	15.53	150,904	TON	\$48.72	\$7,352,000
Slidge, Odi	2022	9,558	15.83	151,297	TON	\$61.47	\$9,300,000
Silage,	2023	2,472	17.82	44,053	TON	\$37.37	\$1,646,000
Sorghum	2022	2,582	17.60	45,436	TON	\$77.97	\$3,543,000
Silage,	2023	12,635	17.37	219,477	TON	\$45.83	\$10,059,000
Sudangrass	2022	12,428	15.91	197,734	TON	\$55.72	\$11,018,000
Silage,	2023	2,258	21.38	48,284	TON	\$57.98	\$2,800,000
Triticale	2022	1,692	19.28	32,629	TON	\$84.88	\$2,770,000
Silage,	2023	18,183	16.47	299,475	TON	\$54.45	\$16,306,000
Wheat	2022	18,639	14.85	276,783	TON	\$63.25	\$17,507,000
Silage,	2023	5,481					\$3,422,000
Other ⁶	2022	4,902					\$2,241,000
Oseraria 7	2023	2,342					\$711,000
Organic ²	2022						
Missellanseus	2023	2,199					\$2,289,000
	2022	2,017					\$3,641,000
ΤΟΤΑΙ	2023	581,174					\$200,498,000
IOIAL	2022	575,889					\$273,149,000

1 Limas, All Includes: Baby, Large

2 Beans, Dried Other Includes: Black-eyed, Garbanzo, Unspecified

3 Hay, Other Includes: Forage, Sudangrass

4 Pasture Includes: Clover, Lovegrass, Pasture Irrigated

5 Seed Crops Includes: Black-eyed Bean, Rice

6 Silage, Other Includes: Alfalfa, Barley, Forage, Ryegrass

7 Organic: Previously in the "Organic All" Category

8 Miscellaneous Includes: Bean Straw, Corn Grain, Hops, Industrial Hemp, Rice, Safflower, Wheat Grain, Wheat Straw



APIARY PRODUCTS

CATEGORY	YEAR	PRODUCTION TOTAL	PRODUCTION UNITS	VALUE PER UNIT	TOTAL VALUE
Henov 1	2023	6,086,433	LB	\$2.27	\$13,816,000
Honey -	2022	6,613,252	LB	\$2.87	\$18,980,000
Pollination,	2023	434,745	COLONY	\$192.38	\$83,636,000
Almond	2022	423,023	COLONY	\$206.61	\$87,401,000
Pollination,	2023	20,482	COLONY		\$1,705,000
Other ²	2022	12,565	COLONY		\$920,000
Missellerseure 3	2023				\$687,000
Miscellaneous °	2022				\$606,000
ΤΟΤΑΙ	2023				\$99,844,000
IOTAL	2022				\$107,907,000

1 Honey Includes: Resident Colonies Plus Value of Migratory Colony Production During Almond Pollination 2 Pollination, Other Includes: Berries, Cucumber, Kiwi, Melon, Pumpkin, Squash, Tree Fruit & Nut Crops, Vegetable 3 Miscellaneous Includes: Beeswax, Queens



FRUIT & NUT CROPS

CATEGORY	YEAR	HARVESTED ACRES	YIELD PER ACRE	YIELD TOTAL	UNIT	VALUE PER UNIT	TOTAL VALUE
	2023	211,149					\$813,444,000
Aimonds, Ai	2022	211,511					\$752,971,000
Almonds,	2023	211,149	1.12	235,431	TON	\$3,212.77	\$756,385,000
Meat	2022	211,511	1.05	222,087	TON	\$2,969.32	\$659,447,000
Almond,	2023			470,862	TON	\$109.29	\$51,461,000
Hull	2022			444,174	TON	\$194.55	\$86,413,000
Almonds,	2023			235,431	TON	\$23.78	\$5,599,000
Shells	2022			222,087	TON	\$32.02	\$7,111,000
Apricata All 1	2023	1,962					\$13,798,000
Apricors, All -	2022	1,921					\$8,973,000
Charries All 1	2023	4,238					\$36,647,000
Chemes, All	2022	3,893					\$39,674,000



FRUIT & NUT CROPS - CONTINUED

CATEGORY	YEAR	HARVESTED ACRES	YIELD PER ACRE	YIELD TOTAL	UNIT	YIELD PER ACRE	TOTAL VALUE
Wine Grapes,	2023	6,462					\$32,211,000
All	2022	7,095					\$34,536,000
Ded Cranes	2023	3,575	10.81	38,640	TON	\$474.00	\$18,316,000
ked Grapes	2022	4,363	10.82	47,212	TON	\$501.66	\$23,685,000
White	2023	2,887	11.23	32,422	TON	\$428.57	\$13,895,000
Grapes	2022	2,731	9.26	25,293	TON	\$429.03	\$10,851,000
	2023	1,492	3.47	5,170	TON	\$944.00	\$4,880,000
Olive, Oli	2022	1,272	3.88	4,929	TON	\$885.92	\$4,367,000
	2023	3,560					\$37,427,000
reaches, All -	2022	3,586					\$43,474,000
Distachas	2023	1,777	1.62	2,870	TON	\$3,514.50	\$10,085,000
FISIACIIOS	2022	2,081	1.03	2,144	TON	\$3,977.25	\$8,526,000
Malputa	2023	30,781	2.16	66,334	TON	\$836.81	\$55,509,000
	2022	36,040	1.56	56,223	TON	\$760.00	\$42,729,000
Organia ²	2023	4,703					\$23,898,000
Organic	2022						
Miccollanoous 3	2023	1,667					\$28,581,000
	2022	2,120					\$26,918,000
τοται	2023	267,791				\$	1,056,480,000
	2022	269,520					\$962,169,000

1 Apricots/Cherries/Peaches, All Includes: Fresh, Processing

2 Organic: Previously in the "Organic All" Category

3 Miscellaneous Includes: Apples, Avocados, Berries (Blackberries, Blueberries, Boysenberries, Raspberries, Strawberries), Chestnuts, Citrus (Grapefruit, Lemons, Mandarins, Oranges, Pomelos), Figs, Grapes (Raisin, Table), Jujubes, Kiwis, Pears, Pecans, Persimmons, Pomegranates, Stone Fruit (Nectarines, Plums, Pluots, Prunes, Unspecified)



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LIVESTOCK & POULTRY

CATEGORY	YEAR	NUMBER OF HEAD	TOTAL VALUE
Cattle C Calves All1	2023	270,225	\$208,749,000
Carrie & Calves, All-	2022	267,825	\$192,802,000
	2023	18,730	\$3,307,000
Godis, All -	2022	18,213	\$3,991,000
Doultry All 2	2023	190,338,469	\$399,855,000
Pouliry, All -	2022	182,388,407	\$383,168,000
Chaop All 1	2023	3,456	\$615,000
Sheep, All -	2022	3,090	\$635,000
Swine	2023	23,610	\$4,180,000
Swine	2022	23,594	\$3,797,000
Oursenie 3	2023		\$45,953,000
Organic	2022		
ΤΟΤΑΙ	2023		\$662,659,000
IUIAL	2022		\$584,393,000

1 Cattle & Calves, All Includes: Dairy, Meat

2 Poultry, All Includes: Chickens, Chicks, Chukar, Duck, Guineas, Peacock, Pheasant, Poults, Quail, Squab, Turkeys 3 Organic: Previously in the "Organic All" Category



LIVESTOCK & POULTRY PRODUCTS

CATEGORY	YEAR	YIELD TOTAL	UNIT	VALUE PER UNIT	TOTAL VALUE
	2023	30,171,114	DOZ		\$54,335,000
Eggs, All -	2022	33,129,645	DOZ		\$84,198,000
	2023	38,067,141	CWT		\$761,529,000
IVIIIK, All	2022	42,725,004	CWT		\$1,130,572,000
Milk Cow	2023	37,970,722	CWT	\$19.82	\$752,390,000
IVIIIK, COW	2022	42,633,189	CWT	\$26.40	\$1,125,516,000
	2023	96,420	CWT		\$5,236,000
Milik, Offier -	2022	91,815	CWT		\$5,056,000
Manura All 3	2023	530,526	TON		\$3,316,000
Manure, All	2022	622,213	TON		\$7,778,000
$\lambda / \alpha \alpha \Lambda \parallel 4$	2023	15,151	LB		\$7,000
wooi, Ali	2022	15,895	LB		\$18,000
Organia ⁵	2023				\$3,912,000
	2022				
τοται	2023				\$823,099,000
TOTAL	2022				\$1,222,566,000

*CWT = Hundred Weight

MILK

1 Eggs, All Includes: Chicken, Duck, Quail Eggs

2 Milk, All Includes: Goat, Sheep Milk

- 3 Manure, All Includes: Chicken, Cow, Turkey
- 4 Wool, All Includes: Alpaca Fiber, Sheep Wool
- 5 Organic: Previously in the "Organic All" Category





CATEGORY	YEAR	FIELD ACRES	UNITS SOLD	TOTAL VALUE
	2023	1,252	32,852,306	\$146,328,000
	2022	1,153	26,959,746	\$175,035,000
Ornamontal	2023	447	2,330,027	\$41,110,000
Omamenia	2022	542	2,550,935	\$42,762,000
Missellers ave 1	2023	338		\$20,472,000
Miscellaneous -	2022	292		\$25,198,000
ΤΟΤΑΙ	2023	2,038		\$207,910,000
IUIAL	2022	1,987		\$242,995,000

1 Miscellaneous Includes: Cut Flowers, Strawberry Transplants, Turf, Vegetable Transplants



OTHER AGRICULTURE

CATEGORY	YEAR	YIELD TOTAL	UNIT	VALUE PER UNIT	TOTAL VALUE
Firewood All 1	2023	43,943	CORD	\$340.00	\$14,941,000
FIFEWOOD, All -	2022	57,345	CORD	\$340.00	\$19,497,000
Other Agriculture All 3	2023				\$14,980,000
Other Agriculture, All *	2022				\$16,435,000
ΤΟΤΑΙ	2023				\$29,921,000
IUIAL	2022				\$35,933,000

1 Firewood, All Includes: Fruit, Nut Trees

2 Other Agriculture, All Includes: Aquaculture (Channel Catfish, Largemouth Bass, Silver Carp), Compost, Vermiculture, Wood Products (Mulch, Chips)



VEGETABLE CROPS

CATEGORY	YEAR	HARVESTED ACRES	YIELD PER ACRE	YIELD TOTAL	UNIT	VALUE PER UNIT	TOTAL VALUE
	2023	3,405					\$39,559,000
Meions, All	2022	2,247					\$22,031,000
Dupphing	2023	425	17.45	7,408	TON	\$332.75	\$2,465,000
Pumpkins	2022	324	25.00	8,091	TON	\$389.00	\$3,147,000
Sweet Potatoes	2023	1,588	21.75	34,541	TON	\$563.50	\$19,464,000
	2022	1,936	21.80	42,195	TON	\$665.63	\$28,086,000
	2023	11,767					\$107,111,000
Tomatoes, All -	2022	9,998					\$53,478,000
Organia 3	2023	1,369					\$11,038,000
Organic ³	2022						
	2023	6,953					\$106,034,000
Miscellaneous +	2022	7,097					\$109,427,000
ΤΟΤΑΙ	2023	25,507					\$285,671,000
IUIAL	2022	21,602					\$216,170,000

1 Melons, All Includes: Cantaloupe, Honeydew, Unspecified, Watermelon

2 Tomatoes, All Includes: Fresh, Processing

3 Organic: Previously in the "Organic All" Category

4 Miscellaneous Includes: Asparagus, Basil, Bean Succulent, Beet, Bok Choy, Broccoli, Brussels Sprout, Cabbage, Carrot, Cauliflower, Celeriac, Chinese Greens, Cilantro, Cole Crop, Collard Greens, Corn (Human Consumption, Sweet), Cucumber, Daikon, Dandelion Greens, Dill, Eggplant, Endive, Fava Bean, Garlic, Herb-Spice, Jicama, Kale, Kohlrabi, Leek, Lettuce, Mint, Mustard Greens, Onion, Parsley, Pea, Pepper, Potato, Radish, Rutabaga, Spinach, Squash, Swiss Chard, Turnip, Vegetable

NEW INVASIVE BEETLE

Jhalendra Rijal, Ph.D. University of California Cooperative Extension, Stanislaus County

Background and Pest Status: Carpophilus beetle (CB) (Scientific name: Carpophilus truncatus) has recently been found to infest California's almond, pistachio, and walnut orchards and has caused significant damage in those orchards. The initial survey confirmed its presence across the Central Valley, including Stanislaus County, and is believed to be more widespread. It might have gone undetected due to its small body, cryptic habit, and resemblance with other Carpophilus species. However, CB is believed to be the only species of the Carpophilus genus that attacks maturing hull-split nuts and impacts nut quality. This pest has also been found infesting nut crop orchards in Italy, Argentina, and Australia.

Life History and Damage: CB is a tiny (size: ~2.5 mm) beetle (Photo 1). It goes through four life stages: egg, larva, pupa, and adult. CB adults overwinter in leftover almonds "mummy nuts," on the ground. In spring, they lay eggs. After hatching, larvae make their way into the nutmeat inside the shell. Both adults and larvae can feed on the nutmeat. Initial feeding can result in a tunnel in the kernel, but ultimately, the entire kernel turns into a fine powdery mix that includes frass, nutmeat powder, and some webbings (Photo 2). In contrast, navel orangeworm (NOW) feeding damage is characterized by more granular and darker frass with substantial webbings (Photo 3). A single nut can be infested with both CB and NOW. Carefully looking for the infestation signs of CB and NOW and/or the presence of larval stages can help identify the culprit. When young, CB larvae may look similar to NOW larvae at a glance; however, beetle larvae are smaller, cream-colored, and with two hornlike structures on the anal end, while NOW larvae are fewer (3 or less) but bigger, have a reddish body, and do not have horn-like structures. The advanced stage of NOW larvae (~20 mm) is about four times bigger than that of CB larvae (~5 mm long).



Photo 1: Mahesh Ghimire, UCCE

Photo 2: Almond & Walnut: Jhalendra Rijal, UCCE Pistachio: Sarah Meierotto, UC Riverside

Photo 3: Jhalendra Rijal, UCCE

Monitoring Tools: Commercial monitoring traps or lures for this pest are not yet available in the United States. Pheromones developed and tested in Australia have shown promise for monitoring, and we are working to test that lure. Until commercial lures are available, nut sampling at hull-split, damage assessment at harvest, and remnant mummy nut sampling after harvest should help detect this pest. It is also important that hullers and shellers know about this beetle issue and detect the potential infestation during nut processing. We have not yet investigated the susceptibility of almond varieties. Preliminary field observations show that softer-shelled varieties such as Nonpareil, Monterey, Sonora, and Independence are more affected than those with harder shells and tighter seals.

Pest Control Options: The key to controlling CB, like NOW, is removing and destroying the mummy nuts with flail mowing during the winter. Ground mummies are especially attractive to overwintering beetles, and they seem to recycle them to complete at least one generation on the ground going from spring to summer. Before mowing, use a blower to remove mummies from the edges, under trees (drip lines), and other hiding spots. Once in the middle, shred the mummies thoroughly. Since the beetles are tiny and can survive in a small space, deliberate mowing and double passes might be needed. In Australian studies, insecticides applied during the season seem to have limited effectiveness. To develop proper integrated pest management practices, we are working to better understand the ecology of CB in California and evaluate the efficacy of multiple insecticides against this pest.

Summary: The invasion of CB in California's nut orchards is a significant threat to the industry. This pest can attack nuts directly while still on the tree, especially after the hull split, and damage the nutmeat. Researchers from the University of California and the US Department of Agriculture, with initial funding support from the Almond Board of California and Pistachio Research Board, are working to find solutions for growers to control this pest.



A RANGELAND WILDFIRES & FORAGE PRODUCTION

Theresa Becchetti, UCCE Livestock and Natural Resource Advisor, Stanislaus and San Joaquin Counties

University of California Cooperative Extension (UCCE) researchers (local "Farm Advisors" like myself as well as campus-based Specialists) have been researching wildfires on grazed landscapes more intensively for a few years. Our efforts cover a wide swath of curiosity, from determining the value of forage loss due to fire, to how much fine fuels are removed by grazing, and everything in between. I want to summarize a few key things found over the years to potentially help as we move into fire season.

Determining value of lost forage: After a wildfire, ranchers are left trying to decide what to do next, which often includes determining the value of the forage lost. Everyone realizes they lost the standing forage they had saved for the fall, but the fire impacts the next two growing seasons as well. Through research plots, we have looked at forage growth after a fire and discovered that the growing season after the fire, there is a 40% reduction in forage production and the second year after the fire, there is still a 20% reduction. Why? Most of our annual grasses would have already dropped seeds for the fall and those seeds should not be damaged by the fire. We see a reduction because without any standing biomass (what we refer to as Residual Dry Matter – RDM) there is no micro-climate to protect new seedlings as they germinate. UCANR Publication 8446, Estimating the Cost of Replacing Forage Losses on California Annual Rangelands, includes a set of spreadsheets helpful in determining how many tons of forage would have been lost in the current year, as well as in the next two growing seasons. For more information and access to the spreadsheets, please visit: https://ucanr.edu/sites/forageloss/

How many tons of fine fuels do cattle remove every year in California? For this we used county Crop Reports, Ag Census data and UCCE data. Cattle are found in every county except San Francisco, and graze on about 19.4 million acres of rangeland, primarily privately owned but with a mix of federal and other publicly owned lands in the mountains and desert areas. The amount per acre of fuel removal varied by region from 174 pounds per acre in the southeast (desert) to 1,020 pounds per acre in the San Joaquin-Sierra region with an average statewide of 596 pounds per acre. In the Santa Clara Unit Lightening Complex Fire (SCU Fire) footprint, we calculated forage removal by contacting landowners in the footprint to determine stocking rate (animal unit per acre). Grazing removed 10,602 tons of forage before the SCU Fire began in August 2020. We were able to calculate a reduction in emissions due to grazing, while also taking into consideration normal methane emissions from cattle grazing (rumination).

Flame length and grazing: Generally, hand crews can fight fire on the ground if the flame length is below 4 feet. We wanted to see how high flames would be on different RDM levels. What we found was light to moderate grazing levels (from 2,500 to 1,250 pounds per acre) would probably keep flame length around 4 feet, but that there would be a higher chance the wildfire would keep burning. Moderate to heavy grazing (1,250 to 400 pounds per acre) would have flame length below 4 feet and would allow hand crews to stop the fire. Moderate to heavy grazing will have a patchy appearance, giving hand crews a better chance of stopping a fire.

Bottom line: Grazing plays a role in managing California's large landscape for many different benefits. Grazing not only can reduce the fire risk by removing fine fuels, but grazing heavily in higher risk areas can increase the chances of low flame length and increase the likelihood of hand crews stopping the fire. By grazing, we are also reducing emissions from wildfires. Grazing can help extend the life of shrub removal, further reducing

emissions. Grazing is done by all ruminants – cattle as well as sheep and goats. It is popular in some areas to see small ruminants grazing below houses or along a freeway with electric fence, but cattle also play an important role. When there is wildfire that destroys the ranch's forage base, ranchers should be compensated for what they have lost, and we have a mechanism to determine the value of lost forage. California's wildfire issue is not going to be solved overnight, but ruminant livestock can play an important role in the solution.

UNIVERSITY OF CALIFORNIA Agriculture and Natural Resources



WEIGHTS & MEASURES

WEIGHTS & MEASURES DEPARTMENT

Our Weights & Measures Team serves the people of Stanislaus County by preserving and defending the measurement standards essential in providing citizens a basis of value comparison and fair competition in the marketplace. Any commodity whether bought, sold, traded, bartered, etc., can be checked by weights and measures.

WEIGHMASTER =

Inspectors ensure the accuracy of commercial transactions for those licensed to weigh, measure or count a commodity recorded on a Weighmaster Certificate, frequently when purchaser and/ or seller is not present.

200 + Locations in Stanislaus County with a Weighmaster License



2

PETROLEUM & FUEL METERS

8

Inspectors educate and enforce fuel quality, labeling and advertising requirements at fuel service stations countywide.

- 100 + Fuel Stations Audited for Labeling and Advertising Requirements
- **96%** Retail Motor Fuel Meters (Pumps) Within Tolerance at Initial Test

SERVICE AGENTS

Inspectors ensure agencies and agents performing work on commercial weighing or measuring devices in the county are registered, licensed, and have appropriate and certified testing equipment. Agencies are required to notify the County when commercial devices are sold, rented, installed, serviced, or repaired.

1,295 Service Agents Statewide539 Service Agencies Statewide (can work in any county)11 Service Agencies in Stanislaus County

DEVICES

To ensure market fairness, inspectors annually test devices weighing or measuring product for commercial sale. Device examples include farmer's market scales, vehicle & livestock scales, fuel dispensers and grocery register scales.

6,430 Measuring Devices Inspected2,780 Weighing Devices Inspected



QUANTITY CONTROL =



Inspectors check price accuracy at checkouts and that packaged goods are labeled with accurate weight, measure, or count.

Consumers with concerns about accuracy are encouraged to submit information through the county



online notification system, www.stancounty.com/crm/ Or use the mobile app StanConnect, available in your app store.



2023 STANISLAUS COUNTY AGRICULTURAL REPORT

PESTICIDE SAFETY EFFORTS

PESTICIDE SAFETY EFFORTS

PESTICIDE USE ENFORCEMENT DEPARTMENT =

Our Pesticide Use Enforcement Team works in conjunction with the California Department of Pesticide Regulation (DPR) to provide for the proper, safe, and effective use of pesticides essential for the production of food and fiber. We enforce safe and responsible use of pesticides to protect the environment, ag workers, and our community. This includes evaluating and issuing restricted materials permits, pesticide use reporting, incident investigations, promoting best management practices, and monitoring applications in the field.

NEW CHALLENGES

In 2023 DPR changed requirements for using restricted Burrowing Vertebrate Fumigants (BVF), aluminum and magnesium phosphide. Licensees must now pass a new BVF exam in addition to the revised general Private Applicator Certificate (PAC) exam. Our team held a series of review sessions in English and Spanish to assist applicators in preparing for the new exams and worked with local libraries to provide study material. Stanislaus was the only county statewide to offer exam preparation. 11 Review & Exam Sessions

81% Pass Rate for PAC

89% Pass Rate for BVF



PRIVATE APPLICATOR CERTIFICATIONS

A PAC is the minimum license required to use or supervise the use of restricted materials. To maintain a PAC, DPR-approved continuing education credits must be completed within the certification time frames allotted by DPR or the exam must be retaken. To assist applicators, the Commissioner's office holds a series of DPR-approved courses for renewal credits.

9 Continuing Education Classes

18 Continuing Education Credits Offered



PESTICIDE DISPOSAL EVENT

With a one-time grant from DPR, the Commissioner's office partnered with Merced, Tuolumne and Mariposa counties to offer a safe disposal event for unwanted or obsolete pesticides. The event was held at the Stanislaus Commissioner's office with ACTenviro over the course of two days in October.

71,215 lbs of Pesticides Collected **95** Participating Growers

CONTAINER RECYCLING Funded by the pesticide industry, the Commissioner's office coordinates biannual free pesticide container recycling events in spring and fall at different locations within the county.

49,500 Plastic Containers Recycled128 Participating Growers



PEST PREVENTION

California Food and Agricultural Code mandates programs preventing introduction and spread of pests in California. Most efforts focus on Pest Exclusion and Pest Detection, a multi-pronged, proactive approach to protect California agriculture from devastating economic impacts of exotic pests. Ensuring and maintaining freedom from pests such as Mediterranean Fruit Fly, Spongy Moth, and Sudden Oak Death supports and facilitates trade of locally produced commodities. Early detection eliminates pesticide applications to control establishing pests, protecting natural resources and the environment.

PEST EXCLUSION

Pest Exclusion is often the first, last, and only means to prevent exotic pests from entering the state. Inspectors conduct commodity inspections at production and harvest locations, packing and shipping facilities, nurseries, markets, and commercial parcel carriers to ensure established quarantine compliance and intercept hitch-hiking pests. When agricultural pests or diseases of concern are discovered, immediate quarantine action may be taken to eliminate or limit pests spreading.

INSPECTION TYPE	LOCATION VISITS	SHIPMENTS INSPECTED
Parcel Terminals (FedEx, UPS)	480	4,849
Interstate Apiary Shipments	153	161
Seed Shipments	43	94
Intrastate Quarantine Nursery "Blue-Tag" Shipments	272	1,067
Quarantined Interstate Plant & Plant Material Shipments	343	366
Sudden Oak Death	1	1
TOTAL	1,292	6,538

PESTS OF CONCERN	TRAPS DEPLOYED	INSPECTION VISITS	PROPERTIES TRAPPED
Asian Citrus Psyllid	502	5,869	2,755
Apple Maggot	18	198	3
European Corn Borer	19	134	19
European Grapevine Moth	200	2,050	36
Glassy-Winged Sharpshooter	1,937	28,316	1,986
Japanese Beetle	204	1,427	204
Khapra Beetle	120	725	33
Mediterranean Fruit Fly - Jackson Trap	426	5,167	1,633
Mediterranean Fruit Fly - Champ Trap	96	612	523
Melon Fruit Fly	220	2,098	451
General Fruit Fly - McPhail Trap	221	5,347	502
Oriental Fruit Fly	429	5,174	1,636
Spongy Moth	204	1,413	204
Vine Mealybug	18	54	5
TOTALS	4,614	58,584	9,990

PEST DETECTION

Pest Detection is the second line of defense preventing introduction and establishment of detrimental, agricultural non-native and environmental pests through early detection and prompt eradication. Annually, the Agricultural deploys, Commissioner's Office inspects, and maintains a countywide network of traps that target a variety of significant pests of concern.



Mediterranean Fruit Fly



https:

EXPORTS

WHAT IS A PHYTOSANITARY CERTIFICATE?

Many countries and states importing agricultural products require commodities be free from harmful plants, pests, and diseases. Inspectors with federal accreditation as Authorized Certification Officials confirm commodity cleanliness and quarantine compliance before shipping.

12,917 Certificates Were Issued to 110 Countries & 20 U.S. States

INTERNATIONAL CERTIFICATES

TOP TEN COUNTRIES: 61% of International Certificates Were for 10 Countries



DOMESTIC CERTIFICATES



XPORTS

2023 DISTINGUISHED SERVICE AWARD ALAN COVER

1976-2002 MJC Ag Instructor Plant & Soil Science, Dean 2002-2004

Educator and farmer Alan Cover is a testament to the spirit of the Stanislaus County Farm Bureau's (SCFB) Distinguished Service Award. The annual award honors individuals integral to the local agricultural community. Cover served over a quarter century as a plant and soil sciences instructor at Modesto Jr. College, and several years teaching agriculture at Modesto High School. Past California Farm Bureau Federation and SCFB President Paul Wenger spoke on Cover's influence, noting, "People across this state-and across the nation- sat in a classroom either in high school or junior college and you ignited a spark within them that



Photos courtesy Stanislaus County Farm Bureau

has paid dividends not only for themselves, but agriculture in general." Awarded at the annual meeting, friends and colleagues spoke reverently about Cover's mentorship, honesty and integrity. Local Nurseryman Tim Roos recalled, "He had faith in my abilities even more so than I did myself."

2023 FARMWORKER APPRECIATION PLATINUM AWARD SALVADOR ANAYA Stewart & Jasper Orchards

Now in its fourth year, the Farm Worker of the Year award was started by the Stanislaus County Farm Bureau, AgSafe and the Modesto Rotary Club during the COVID pandemic to recognize essential agricultural workers.

Stewart & Jasper Orchards celebrated its 75th anniversary in 2023, and Salvador Anaya has been part of the almond growerprocessor's employee family for 54 of those years. At 17 years old, Anaya began taking on ranch responsibilities with a cando attitude and a positive personality. He has overseen a wide



Photos courtesy Stanislaus County Farm Bureau

variety of tasks and is known for meticulous record-keeping. "It's helped us tremendously," said manager Ray Henriques. "If we ever have a question of what we've done in the past, I just ask Salvador." Company President Jim Jasper saw Anaya as dedicated, with a work ethic not often found. "He had a passion for work and a strong work ethic for a young man. He has been very loyal and very dependable. Nowadays, it's very hard to get young people who want work." When the award was announced at a company meeting at the headquarters in Newman, Anaya thanked Stewart and Jasper, remarking, "I enjoy what I do and am still happy being here."

Original Story by Vicky Boyd, Stanislaus County Farm Bureau Farm News March 2024 Edition



U.S. AG VALUES STANISLAUS COUNTY RANKS HIGHER THAN 17 STATES

1	California	\$58.410.387
2	lowa	\$44 781 637
2	Nebraska	\$31,616,237
1	Toyac	\$20,788,270
4		\$29,700,279 \$27,056,620
C C		\$27,950,020
0	Minnesota	\$20,018,792
/	Kansas	\$23,523,896
8	Indiana	\$18,342,373
9	North Carolina	\$16,867,296
10	Wisconsin	\$16,610,816
11	Ohio	\$15,429,470
12	South Dakota	\$14,133,322
13	Arkansas	\$13,985,603
14	Georgia	\$13,075,578
15	Washington	\$12,139,065
16	Michigan	\$12,076,269
17	North Dakota	\$11,343,731
18	Idaho	\$11,286,022
19	Pennsylvania	\$9,661,156
20	Oklahoma	\$9,525,081
21	Colorado	\$8,951,488
22	Florida	\$8,878,808
23	Alabama	\$8.516.923
24	Kentucky	\$8,195,117
25	Mississippi	\$7 831 624
26	New York	\$7 558 078
27	Oregon	\$6 252 265
28	Missouri	\$6,232,203
20	Arizona	\$5,240,433
20	Toppossoo	\$5,240,433 \$5,133,574
21	Virginia	\$5,133,574 \$5,054,652
S⊥ 22	Montana	\$3,034,032 \$4,592,662
3Z 22		\$4,302,002 \$4,254,202
33		\$4,234,263
2.4	STANISLAUS 2022	\$3,726,482
34		\$3,724,442
35	South Carolina	\$3,546,883
30	Maryland	\$3,267,891
3/	Utah	\$2,/19,151
38	Delaware	\$2,013,636
39	Wyoming	\$1,908,936
40	New Jersey	\$1,482,461
41	Vermont	\$1,039,159
42	Nevada	\$958,692
43	Maine	\$939,864
44	West Virginia	\$899,445
45	Connecticut	\$686,023
46	Hawaii	\$639,224
47	Massachusetts	\$503,293
48	New Hampshire	\$266,520
49	Rhode Island	\$76,768

Source: United States Department of Agriculture Economic Research Service 2022 Farm Income and Wealth Statistics





PERCENT OF FARMS THAT

- Farm Organically 1%
- Hire Farm Labor 40%
- Are Family Farms 91%
- Have Internet Access 84%
- Sell Directly to Consumers 3%

AVERAGE AGES OF OUR FARMERS

- 53% Are Ages 35 to 64
- 39% Are Over Age 65 (Previously 58% & 34% in 2017)





OTHER FARM FACTS

• We Have 3,455 Farms

• Our Farmers Produce Over 150 Different Commodities

- The Average Farm Size is 198 Acres
 - \$\$\$ AG PRODUCTION VALUE We Rank 8th of 3,078 U.S. Counties With Ag Sales We Produce 5% of California Ag Sales \$\$\$

Source: United States Department of Agriculture 2022 Census of Agriculture

WEATHERING THE STORM

Stanislaus County (as a whole) experiences a major event worthy of a disaster declaration at least every few years. Looking at the chart on this page, agriculture specifically encounters a disastrous event nearly every year and a theme emerges: weather. Technology has increased our ability to predict, prepare for, react to, and recover from disasters; but we are still at the whim of the weather.

In recent years, our producers have faced uncertainty from dry winters, stressing irrigation districts and groundwater sustainability agencies. Prolonged, excessive heat has scorched walnuts and killed livestock. Severe storms have brought torrential rain and incredible winds that downed trees, flooded fields, and delayed planting schedules. COVID-19 took its toll on trade, affecting our number one exported commodity, almonds.



But agriculturalists are a tenacious bunch. They persist. They're often called gamblers, or as we prefer, eternal optimists.

Our department's mission statement is to "support and protect the well-being of Agriculture, Business and the Community." Because quantity and types of damage are determining factors in emergency declarations, we cannot emphasize enough the importance of producers reaching out to our department and our partnering organizations on the following page as soon as damages happen so documentation can begin for aid assistance.





YEAR	HAZARD TYPE
1965	Severe Storm / Flood
1969	Severe Storm / Flood
1977	Drought
1983	Flood
1991	Freeze
1995	Severe Storm / Flood
1997	Severe Storm / Flood
1998	Severe Storm / Flood
2002	Drought
2005	Cherry Rain Damage
2006	Severe Storm / Flood / Excessive Heat
2007	Freeze
2008	Drought
2009	Drought
2010	Flood
2011	Cherry Rain Damage
2012	Drought / Freeze
2013	Drought / Freeze
2014	Drought
2015	Drought
2016	Drought / Cherry Rain Damage
2017	Drought / Severe Storm / Flood/ Hail
2018	Drought
2019	Cherry Rain Damage
2020	Drought / Flood / COVID-19 / Wildfire
2021	Drought
2022	Flood / Freeze / Excessive Heat
2023	Flood / Freeze
C Ctore	

Sources: Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan & The Agricultural Commissioner's Office



PLANNING FOR DISASTER

PLANNING FOR DISASTER

Our local economy's ability to recover from a natural disaster or animal disease outbreak greatly depends on the agriculture industry's ability to return to normal operations. Although not exhaustive, this page is intended to be a reference of agencies for disaster planning, prevention, assistance & recovery.

COUNTY RESOURCES



StanAware is the County Office of Emergency Services (OES) system for contacting the public directly through text, email or telephone in case of a large-scale emergency or disaster. For more information: www.stanaware.com

The **Agricultural Commissioner** collects commercial crop loss data from natural disasters and publishes information regarding disaster declarations. The County Ag Pass program is also facilitated through this office. For more information www.stanag.org/disaster.shtm www.stanag.org/ag-livestock-pass.shtm

Fink Landfill, run by the Department of Environmental Resources, may accept disaster-related items like fire debris, and animal carcasses, under specific conditions by appointment. For more information: www.stancounty.com/er/landfill/

The County Assessor's Office offers tax relief for real property, including business equipment, damaged due to disaster. For more information: www.stancounty.com/assessor/ DisasterRelief.shtm

STATE RESOURCES

CDFA's Animal Health Branch Emergency Preparedness & Response Section provides coordination and leadership for prevention,



mitigation, preparedness, and response for emergencies impacting animal health during natural disasters. For more information: www.cdfa.ca.gov/AHFSS/Animal_Health/eprs/

CDFA's Plant Health & Pest Prevention Services Division provides information regarding current invasive insect quarantines, pest detection and emergency projects. For more information: www.cdfa.ca.gov/plant/



California Veterinary Emergency Team works through University of

California at Davis & partners with state agencies like **California OES** and **CDFA's California Animal Response Emergency Support (CARES),** nongovernmental organizations, veterinarians and others like county fairgrounds during emergencies affecting animals and livestock. http://cvet.vetmed.ucdavis.edu/





FEDERAL RESOURCES



The United States Department of Agriculture (USDA) Farm Service Agency provides numerous programs for natural FARM SERVICE AGENCY disaster affecting crops and livestock. Contact the Stanislaus County office as soon as disaster happens for updates and assistance at 209-287-3669 Ext. 2. For more information:www.fsa.usda.gov/programs-and-services/disaster-assistance-program/index, www.farmers.gov/protection-recovery

USDA's Natural Resources Conservation Service provides program **ORGS** resources for operations recovering from disaster, as well as prevention and **Invasive** weed proliferation. For more information: Modesto Service Center (209) 491-9320 Ext.3, www.nrcs.usda.gov/getting-assistance/disaster-recovery









https://www.stanag.org/agricultural-statistics.shtm