STANISLAUS COUNTY AGRICULTURAL REPORT



= 2019 =

Celebrating the Hands That Feed Us

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COVER STORY

James "Jim" Curtoni was born and raised in Oakdale, California. He remained in Oakdale where he and his wife raised their family. Jim was a cattle rancher his entire life. He ran commercial Hereford cattle in the North Eastern parts of Stanislaus County in the fall/winter. In the summer, the cattle were brought down to irrigated pasture located between Oakdale and Riverbank. He spent most of his time checking cattle, fixing fences, irrigating, and the list goes on, but he loved this way of life. The freedom of cattle ranching allowed him the time to visit with friends, family and neighbors. There were always stories being told and lots of laughs. He continued ranching until the age of 78 when he passed. His family proudly continues to carry on the cattle ranching business.

> Cover Story and Photograph Courtesy Ann Curtoni-Lial Photographer: Aaron Draper



AGRICULTURAL COMMISSIONER'S OFFICE AND SEALER OF WEIGHTS & MEASURES

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Karen Ross, Secretary

California Department of Food and Agriculture

and

The Honorable Board of Supervisors of Stanislaus County

Kristin Olsen	District 1, Chairwoman
Vito Chiesa	District 2, Vice Chairman
Terry Withrow	District 3
Tom Berryhill	District 4
Jim DeMartini	District 5

In accordance with Sections 2279 of the California Food and Agricultural Code, we are pleased to submit Stanislaus County's Agricultural Report for 2019. This report provides a statistical description of Stanislaus County's agricultural production. We must emphasize that this report represents gross values of agricultural commodities and does not reflect production costs or profits.

The value of agricultural commodities produced last year in Stanislaus County increased to \$3,598,404,000. This represents a small increase of 1% or \$28 million above the 2018 value of \$3,569,990,000.

Although the overall value of agricultural commodities varied little, there were some commodities that experienced significant changes. Organic products decreased by \$132 million due mostly to less organic poultry and dairy production, almonds increased by \$121 million as 20,000 new acres came into production, chickens increased by \$88 million, cattle and calves decreased by \$38 million, peaches decreased by \$29 million, and melons increased by \$25 million.

We wish to express our appreciation to the agricultural producers, industry representatives and public agencies that provide data for this report. We would also like to express our thanks to the UC Cooperative Extension, and the Agricultural Commissioner's crop report team that compiled, designed and edited this report.

Respectfully submitted,

Milto Olfai

Milton O'Haire Agricultural Commissioner/Sealer Stanislaus County

Jennifer Heguy County Director, UC Cooperative Extension Stanislaus County

SO GOD MADE A FARMER

And on the 8th day, God looked down on his planned paradise and said, "I need a caretaker." *So God made a Farmer.*

God said, "I need somebody willing to get up before dawn, milk cows, work all day in the fields, milk cows again, eat supper and then go to town and stay past midnight at a meeting of the school board." *So God made a Farmer.*

"I need somebody with arms strong enough to rustle a calf and yet gentle enough to deliver his own grandchild. Somebody to call hogs, tame cantankerous machinery, come home hungry, have to wait lunch until his wife's done feeding visiting ladies and tell the ladies to be sure and come back real soon -- and mean it." **So God made a Farmer.**

God said, "I need somebody willing to sit up all night with a newborn colt. And watch it die. Then dry his eyes and say, 'Maybe next year.' I need somebody who can shape an ax handle from a persimmon sprout, shoe a horse with a hunk of car tire, who can make harness out of haywire, feed sacks and shoe scraps. And who, planting time and harvest season, will finish his forty-hour week by Tuesday noon, then, pain'n from 'tractor back,' put in another seventy-two hours." **So God made a Farmer.**

God had to have somebody willing to ride the ruts at double speed to get the hay in ahead of the rain clouds and yet stop in mid-field and race to help when he sees the first smoke from a neighbor's place. *So God made a Farmer.*

God said, "I need somebody strong enough to clear trees and heave bails, yet gentle enough to tame lambs and wean pigs and tend the pink-combed pullets, who will stop his mower for an hour to splint the broken leg of a meadow lark. It had to be somebody who'd plow deep and straight and not cut corners. Somebody to seed, weed, feed, breed and rake and disc and plow and plant and tie the fleece and strain the milk and replenish the self-feeder and finish a hard week's work with a five-mile drive to church.

"Somebody who'd bale a family together with the soft strong bonds of sharing, who would laugh and then sigh, and then reply, with smiling eyes, when his son says he wants to spend his life 'doing what dad does.'" **So God made a Farmer.**

Paul Harvey

TOP 10 COMMODITIES



Almonds

2019 Value \$1,228,536,000

2018 Value \$1,107,328,000

Almonds account for 34% of all Agricultural Commodity Value in Stanislaus County for 2019



Milk 17% 2019 Value \$628,701,000 2018 Value \$636,499,000



Chickens 10% 2019 Value \$365,786,000 2018 Value \$276,879,000





Cattle & Calves 6% 2019 Value \$198,477,000 2018 Value \$236,822,000

Nursery, 5% Fruit & Nut Trees, & Vines

> 2019 Value \$175,314,000 2018 Value \$170,164,000



Silage 4% 2019 Value \$137,001,000 2018 Value \$135,901,000

Walnuts 3% 2019 Value \$122,549,000

2018 Value \$102,661,000



Pollination

2019 Value \$83,945,000 2018 Value \$75,847,000



Turkeys 2% 2019 Value \$60,931,000

2018 Value \$64,342,000

Melons 1% 2019 Value \$51,490,000 2018 Value \$25,874,000

SUMMARY		2019 TOTAL	2018 TOTAL	
TOTAL TOP 10	85%	\$3,052,730,000	\$2,832,317,000	
ALL OTHER COMMODITIES	15%	\$545,674,000	\$737,673,000	
TOTAL ALL COMMODITIES	100%	\$3,598,404,000	\$3,569,990,000	

Casey Brizendine grew up farming almonds on his family's farm. "I like to stay active and be outside, and farming lets me do that-and get paid," he says. His interest in bees grew when he met his wife and began helping her family with their beekeeping business. Knowledgeable and focused, Casey now has his own apiary. He has learned to manage the two biggest threats to his apiary; mite levels and the disadvantages of monoculture farming. Remaining optimistic despite the challenges, Casey's commitment to integrity in agriculture is found in his statement, "I became a beekeeper because farmers need heroes too. As a family farmer, it's important to always be honest and fair with anyone you're doing business with because you should want your community and the people in it to prosper."

SUMMARY

CATEGORY	YEAR	HARVESTED ACRES	TOTAL VALUE	
	2019		\$109,523,000	
Aplary Products	2018		\$89,041,000	
Field Cross	2019	639,534	\$214,113,000	
Field Crops	2018	652,442	\$212,742,000	
	2019	275,627	\$1,484,057,000	
Fruit and Nut Crops	2018	259,901	\$1,390,010,000	
Livesteck and Poultry	2019		\$636,561,000	
Livestock and Poultry	2018		\$588,352,000	
Livestock and Poultry	2019		\$659,186,000	
Products	2018		\$680,197,000	
Nurson, Products	2019	1,650	\$227,537,000	
Nursery Froducts	2018	2,777	\$220,953,000	
Organic Products	2019	16,444	\$61,415,000	
Organic Products	2018	7,038	\$193,609,000	
Other Agriculture	2019	360	\$25,018,000	
Other Agriculture	2018	678	\$23,540,000	
Vagatable Crops	2019	28,223	\$180,994,000	
vegetable crops	2018	28,097	\$171,546,000	
Total	2019	961,838	\$3,598,404,000	
IUldi	2018	950,933	\$3,569,990,000	



APIARY PRODUCTS

CATEGORY	YEAR	TOTAL	UNIT	PER UNIT	TOTAL VALUE	
Poorway 1	2019	662,952	Lb	\$3.25	\$2,155,000	
Deeswax	2018	605,208	Lb	\$3.61	\$2,185,000	
Honoy 1	2019	5,686,746	Lb	\$3.96	\$22,520,000	
Honey *	2018	5,191,424	Lb	\$2.00	\$10,383,000	
Dollination Almond	2019	430,488	Colony	\$195.00	\$83,945,000	
Polimation, Almonu	2018	392,992	Colony	\$193.00	\$75,847,000	
Dollination Other ²	2019				\$903,000	
Polination, Other	2018				\$626,000	
Total	2019				\$109,523,000	
ισται	2018				\$89,041,000	

1 Beeswax and Honey are based on resident colonies plus the value of the colonies during almond pollination season 2 Pollination, Other includes: Apple, Blueberry, Cherry, Cucumber, Melon, Pumpkin, Queen & Bulk Bees, Squash



FIELD CROPS

CATEGORY	YEAR	HARVESTED ACRES	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL VALUE	
Beans, Dried	2019	6,954					\$9,533,000	
All	2018	8,599					\$13,711,000	
Plackovod	2019	1,568	1.02	1,600	Ton	\$992	\$1,587,000	
ыаскеуец	2018	836	0.85	711	Ton	\$1,010	\$718,000	
Pabylimac	2019	1,228	1.15	1,410	Ton	\$987	\$1,392,000	
Baby Limas	2018	1,720	1.52	2,610	Ton	\$913	\$2,383,000	
Largo Limas	2019	3,412	1.20	4,090	Ton	\$1,428	\$5,841,000	
Large Linias	2018	5,197	1.35	7,020	Ton	\$1,370	\$9,617,000	
Beans, Dried ¹	2019	746	0.92	686	Ton	\$831	\$570,000	
Other	2018	846	0.97	821	Ton	\$910	\$747,000	
Boon Strow	2019			4,090	Ton	\$35	\$143,000	
Dean Straw	2018			7,020	Ton	\$35	\$246,000	
	2019	18,664	6.82	127,000	Ton	\$198	\$25,146,000	
Hay, Allalla	2018	18,639	6.72	125,000	Ton	\$212	\$26,500,000	
Hay Oat	2019	9,018	4.08	36,800	Ton	\$135	\$4,968,000	
nay, Oat	2018	8,945	4.14	37,000	Ton	\$143	\$5,291,000	
Hay Other ²	2019	10,748					\$6,125,000	
nay, Other -	2018	8,287					\$4,921,000	

The Van Groningen family has run a diversified farming operation for over 40 years, but is most widely known for their watermelon and pumpkins. Growing up watching tractors go round and round in a field, Tommy Van Groningen knew he always wanted to be a farmer. Now a farm manager, he spends much of his time on farm related paperwork, irrigation, field set up and pest control. His favorite time is harvest. "During the busy season, it's those late hours in a field. Not because working twelve-plus hours is the best way to spend the summer, but because of the peaceful feeling of being in a field after everyone else has gone home for the day. When you finish a field from planting, growing, to harvest it brings you this satisfaction that you and all members of the team accomplished something beneficial."

FIELD CROPS continued

	CATEGORY	YEAR	HARVESTED ACRES	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL VALUE	
	Pasture,	2019	32,000			Acre	\$297	\$9,504,000	
	Irrigated	2018	32,000			Acre	\$265	\$8,480,000	
	Dangaland	2019	421,449			Acre	\$35	\$14,751,000	
	Kangelanu	2018	421,449			Acre	\$35	\$14,751,000	
		2019	139,443					\$137,001,000	
	Sliage, All	2018	153,318					\$135,901,000	
	Corp	2019	70,857	27.67	1,961,000	Ton	\$50	\$98,050,000	
Com	2018	81,890	27.08	2,218,000	Ton	\$44	\$97,592,000		
	Oat	2019	27,054	14.54	393,000	Ton	\$33	\$12,969,000	
	Oat	2018	26,833	15.16	407,000	Ton	\$30	\$12,210,000	
	Other ³	2019	20,910					\$13,562,000	
	Other	2018	22,454					\$13,555,000	
	W/boat	2019	20,622	16.74	345,000	Ton	\$36	\$12,420,000	
	Wheat	2018	22,141	17.71	392,000	Ton	\$32	\$12,544,000	
	Miscollapoous 4	2019	1258					\$7,085,000	
	Wiscellaneous	2018	1,205					\$3,187,000	
	Total	2019	639,534					\$214,113,000	
	IUIdI	2018	652,442					\$212,742,000	

1 Beans, Dried Other includes: Garbanzos, Jackson Wonder, Red Lima

2 Hay, Other includes: Clover, Grass, Sudan, Wheat, Winter Forage

3 Sileage, Other includes: Alfalfa, Barley, Broccoli Stalks, Grass, Ryegrass, Sorghum, Sudan, Triticale, Vetch, Winter Forage

4 Miscellaneous includes: Barley, Corn Earlage, Corn Grain, Corn Human Consumption, Corn-Sweet, Industrial Hemp, Rice, Safflower, Wheat Grain, Wheat Straw

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A third generation farmer, Charles (Chuck) Voss has grown permanent crops in the Ceres-Modesto area since 1959. Chuck has grown almonds, walnuts, peaches and now provides custom brush shredding. "I have seen changes, good and bad. In almonds we have seen a trend in positive marketing of the crops, but in peaches I have seen canneries close and the peach industry fading. We need to find new markets for canned fruit. I like seeing a good crop being harvested; proof of all the hard work that had been put into it and seeing the love of agriculture in my kids. Personally, I love getting on a tractor and just driving!"

FRUIT & NUT CROPS

CATEGORY	YEAR	HARVESTED ACRES	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL VALUE	
Almonds All	2019	216,265					\$1,228,536,000	
Aimonus, Ai	2018	196,496					\$1,107,328,000	
Almond Mosts	2019	216,265	1.10	237,900	Ton	\$4,965	\$1,181,174,000	
Almonu meats	2018	196,496	1.15	226,000	Ton	\$4,700	\$1,062,200,000	
Almond Hulls	2019			476,000	Ton	\$95.60	\$45,506,000	
Aimona Hulis	2018			452,000	Ton	\$96.50	\$43,618,000	
Almond Shalls	2019			238,000	Ton	\$7.80	\$1,856,000	
Almona Shelis	2018			226,000	Ton	\$6.68	\$1,510,000	
Andreate	2019	2,549	7.20	18,400	Ton	\$647	\$11,905,000	
Apricots	2018	3,678	5.77	21,200	Ton	\$824	\$17,469,000	
Charries	2019	3,282	1.91	6,270	Ton	\$3,638	\$22,810,000	
Chemes	2018	3,411	1.82	6,210	Ton	\$5,470	\$33,969,000	
Citrue ¹	2019	512					\$5,333,000	
Citius	2018	501					\$4,871,000	
Grapos All	2019	9,226					\$40,738,000	
Grapes, All	2018	9,655					\$46,709,000	
Pad	2019	5,651	9.32	52,700	Ton	\$520	\$27,404,000	
Reu	2018	5,890	10.23	60,300	Ton	\$495	\$29,849,000	
\\/hita	2019	3,575	8.93	31,900	Ton	\$418	\$13,334,000	
writte	2018	3,765	9.92	37,300	Ton	\$452	\$16,860,000	



FRUIT & NUT CROPS continued

YEAR	HARVESTED ACRES	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL VALUE	
2019	3,136					\$26,744,000	
2018	5,460					\$56,601,000	
2019	2,763	17.75	49,000	Ton	\$463	\$22,687,000	
2018	4,475	16.77	75,000	Ton	\$477	\$35,775,000	
2019	373	12.37	4,610	Ton	\$880	\$4,057,000	
2018	985	11.84	11,700	Ton	\$1,780	\$20,826,000	
2019	37,044	1.71	63,300	Ton	\$1,936	\$122,549,000	
2018	37,468	1.84	68,900	Ton	\$1,490	\$102,661,000	
2019	3,613					\$25,442,000	
2018	3,232					\$20,402,000	
2019	275,627				9	51,484,057,000	
2018	259,901				\$	51,390,010,000	
	YEAR201920182019201820192018201920182019201820192018201820192018	YEARHARVESTED ACRES20193,13620185,46020192,76320192,76320184,47520193732018985201937,044201837,46820193,61320183,2322018275,6272018259,901	YEARHARVESTED ACRESPER ACRE20193,13620185,46020192,76320192,76320184,4752019373201898511.84201937,04420193,61320183,23220183,2322018275,6272018259,901	YEARHARVESTED ACRESPER ACRETOTAL20193,136-20185,460-20192,76317.7520192,76316.7720184,47516.77201937312.37201898511.84201937,0441.71201837,4681.8420193,613-20183,232-2019275,627-2018259,901-	YEARHARVESTED ACRESPER ACRETOTALUNIT20193,13620193,13620185,46020192,76317.7549,000Ton-20192,76316.7775,000Ton201937312.374,610Ton201898511.8411,700Ton201937,0441.7163,300Ton20193,61320193,61320183,2322018259,901	YEARHARVESTED ACRESPER ACRESTOTALUNITPER UNIT20193,13620185,46020192,76317.7549,000Ton\$46320192,76316.7775,000Ton\$477201937312.374,610Ton\$480201898511.8411,700Ton\$1,780201937,0441.7163,300Ton\$1,93620193,74681.8468,900Ton\$1,49020193,61320193,6132019275,6272018259,901	YEARHARVESTED ACRESPER ACRESTOTAL PER UNITPER UNITTOTAL VALUE20193,136\$26,744,00020185,460\$56,601,00020192,76317.7549,000Ton\$463\$22,687,00020184,47516.7775,000Ton\$477\$35,775,000201937312.374,610Ton\$480\$4,057,000201898511.8411,700Ton\$1,780\$20,826,000201937,0441.7163,300Ton\$1,936\$12,2549,00020193,74681.8468,900Ton\$1,940\$10,2661,00020193,613\$20,402,00020193,613\$20,402,00020183,232\$20,402,0002019275,627\$20,402,0002018259,901\$20,402,000

1 Citrus includes: Grapefruit/Pomelos, Lemons, Mandarins, Oranges, Tangerines

2 Miscellaneous includes: Apples, Avocados, Berries (Blackberries, Boysenberries, Blueberries, Raspberries, Strawberries), Chestnuts, Figs, Jujube, Kiwifruit, Nectarines, Olives, Pears, Pecans, Persimmons, Pistachios, Plums, Pluots, Pomegranates, Prunes, Raisin Grape, Quince, Table Grapes



LIVESTOCK & POULTRY

CATEGORY	YEAR	NUMBER OF HEAD	TOTAL VALUE	
Cattle & Calver All	2019	327,970	\$198,477,000	
Cattle & Calves, All	2018	324,075	\$236,822,000	
Doof Foodors 1	2019	133,845	\$30,709,000	
beer reeders	2018	123,955	\$31,299,000	
Roof Slaughtor ²	2019	45,725	\$11,104,000	
beer slaughter	2018	42,720	\$15,112,000	
	2019	74,000	\$96,496,000	
Dairy Replacement	2018	83,000	\$130,141,000	
Dainy Slaughtor ³	2019	74,400	\$60,168,000	
Dairy Slaughter	2018	74,400	\$60,270,000	
Chickops All 4	2019	161,020,385	\$365,786,000	
Chickens, All	2018	159,104,555	\$276,879,000	
Gamo Birds 5	2019	200,310	\$1,322,000	
Gaine bilds a	2018	71,000	\$764,000	
Goats ⁶	2019	15,347	\$1,933,000	
JUdis	2018	13,058	\$1,495,000	

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Cailin Casey has been a member of the Newman 4-H for six years. She shows rabbits and maintains about 65 head of rabbit breeding stock. Since joining 4-H she has wanted to actively promote agriculture in the county. The Stanislaus County 4-H Ambassadors, formerly the All Stars, are a hard-working group of young adults in 4-H engaged in just that activity.

Chosen as a County Ambassador for the 2019-2020 season, Cailin joins two other members of the county-level Gold Star rank within 4-H as team-builders and leaders. A Gold Star member is required to have completed many hours of public speaking, community service, serve on various 4-H positions, and participate in club and county level activities. Cailin has gained rich knowledge about agriculture through local training days, project skills activities, public speaking events, and record book workshops.

Cailin says, "Helping to organize events as a member of the Ambassador team will benefit young members in promoting our agriculturally rich county. Being a County Ambassador was something I looked forward to from the time I was nine years old when I first joined 4-H." Cailin takes pride in being a County Ambassador representing both Stanislaus County and the 4-H program.

LIVESTOCK & POULTRY continued

CATEGORY	YEAR	NUMBER OF HEAD	TOTAL VALUE
Hogs & Digs	2019	22,261	\$3,720,000
HUYS & PIYS	2018	28,437	\$3,971,000
Sheep & Lambs ⁷	2019	3,229	\$595,000
	2018	2,949	\$480,000
C	2019	629,758	\$3,797,000
Squab	2018	596,835	\$3,599,000
Turkova All 8	2019	8,181,139	\$60,931,000
Turkeys, All	2018	8,663,708	\$64,342,000
Terel	2019		\$636,561,000
ισται	2018		\$588,352,000

1 Beef Feeders includes: Beef Heifers, Beef Replacement Heifers, Beef Steers, Drop Calves less Replacement Heifers, Feed Lot Cattle, Transient Cattle

2 Beef Slaughter includes: Beef Bulls, Beef Cows, Dairy Beef

3 Dairy Slaughter includes: Cull Bulls, Cull Cows

4 Chickens, All includes: Chickens, Chicks

5 Game Birds includes: Chukar, Duck, Geese, Guinea, Partridge, Peacock, Pheasant, Quail,

6 Goats includes: Cull Bucks, Cull Does, Dairy Goat Kids less Replacement Does, Meat Goats

7 Sheep & Lambs includes: Cull Ewes, Cull Rams, Lambs, Replacement Ewes, Replacement Rams

8 Turkeys, All includes: Poults, Turkeys

ReeAnn Worley is a 15-year old, first year Oakdale FFA member. ReeAnn joined FFA to learn what is raised and grown here in California. She has chosen to diversify her high school agriculture experience by raising swine and enrolling in an agriculture mechanics class. Due to the COVID pandemic



canceling the Stanislaus County Fair and closing many businesses, ReeAnn was encouraged to become more resourceful in marketing her show hog. In ag mechanics she has learned welding and woodworking basics, integral skills for many farmers. She enjoys the handson learning that FFA provides and believes that FFA helps teach her generation about what goes into making food available.

LIVESTOCK & POULTRY PRODUCTS

CATEGORY	YEAR	TOTAL	UNIT	PER UNIT	TOTAL VALUE	
Eggs, Chicken	2019	27,250,000	Doz	\$0.88	\$23,980,000	
Market	2018	25,431,929	Doz	\$1.44	\$36,622,000	
Eggs Other 1	2019				\$0	
Lygs, Other	2018				\$3,338,000	
	2019	38,207,107	Cwt		\$628,701,000	
IVIIIK, All	2018	40,386,000	Cwt		\$636,499,000	
Milk Dainy Cow	2019	38,120,000	Cwt		\$625,168,000	
Wilk, Daily Cow	2018	40,324,000	Cwt		\$634,164,000	
Milk Other ²	2019	87,107	Cwt		\$3,533,000	
	2018	62,000	Cwt		\$2,335,000	
Manure ³	2019	797,596	Ton	\$8.08	\$6,445,000	
Manure	2018	490,000	Ton	\$7.54	\$3,695,000	
Wool ⁴	2019	39,128	Lb	\$1.54	\$60,000	
W001	2018	24,100	Lb	\$1.80	\$43,000	
Total	2019				\$659,186,000	
iotai	2018				\$680,197,000	

*CWT = HUNDRED WEIGHT

1 Eggs, Other includes: Turkey Hatching Eggs, Quail, Duck Eggs (none reported in 2019)

2 Milk, Other includes: Goat & Sheep Milk

3 Manure includes: Chicken, Cow, Turkey

4 Wool includes: Alpaca Fiber, Sheep Wool



Abby Van Klaveren is a member of the Modesto FFA and a sixth-generation nursery grower. Fittingly, her supervised agricultural experience project is her family's wholesale nursery, Generation Growers, in Modesto. Generation Growers cultivates over 700 different varieties of ornamental plants, primarily for retail nurseries in the Bay Area and northern San Joaquin Valley. Just this Spring of 2020, Abby won an FFA State Award for her Nursery Operations project, nominating her for the national competition in October. Abby oversees the family nursery on-line media, propagates plants, manages green houses and organizes customer workshops. She recently attended the International Plant Society Conference and enjoys going to other workshops and trade shows to stay on the cutting edge of the nursery industry.

NURSERY PRODUCTS

CATEGORY	YEAR	FIELD ACRES	UNIT SOLD	TOTAL VALUE	
Fruit & Nut Trees & Vines	2019	856	22,079,265	\$175,314,000	
	2018	916	16,886,000	\$170,164,000	
Ornamental Trees & Shrubs	2019	453	2,652,334	\$34,022,000	
	2018	453	2,738,000	\$32,738,000	
Missellanaous 1	2019	341		\$18,201,000	
Miscellaneous -	2018	1,408		\$18,051,000	
Tatal	2019	1,650		\$227,537,000	
ισται	2018	2,777		\$220,953,000	

1 Miscellaneous includes: Christmas Trees, Industrial Hemp, Lavender, Raspberry Transplants, Tomato Transplants, Turf



ORGANIC PRODUCTS

CATEGORY	YEAR	HARVESTED ACRES	TOTAL VALUE
All Organic Products	2019	16,444	\$61,415,000
All Organic Products	2018	7,038	\$193,609,000

OTHER AGRICULTURE

CATEGORY	YEAR	TOTAL	UNIT	PER UNIT	TOTAL VALUE	
Firewood	2019	81,099	Cord	\$240.00	\$19,464,000	
Thewood	2018	73,686	Cord	\$235.00\$17,	316,000	
All Other Agric	2019				\$5,113,000	
All Other Agrict	2018				\$5,455,000	
Soud Crops ²	2019	360	Acres		\$441,000	
seed crops -	2018	678	Acres		\$769,000	
Total	2019				\$25,018,000	
Iotal	2018				\$23,540,000	

1 All Other Agriculture includes: Aquaculture (Largemouth Bass, Silver Carp, Channel Catfish), Compost, Vermiculture (Worms, Worm Castings) 2 Seed Crops includes: Blackeye Bean/Cowpea, Lima Bean, Oat, Rice, Vegetable, Rice

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Ken Lundell is a third-generation farmer and WWII veteran from the Hughson area. "Growing up on a farm, I was often alongside my father helping in the orchard. Over the years, farming continued to be a family affair. My wife kept the books and helped grade peaches. In the early days of farming, if a load taken to the cannery was rejected, the load came home, and the family pulled together to grade that load so it could be taken back to the cannery. My children also helped on the farm during their childhoods, just as I had when I was a child."

Now 94 years young and residing at Samaritan Village in Hughson, Ken recounts, "It was hard to move off the ranch after so many years, but I am thankful the farm stayed in the family (the farm is now owned by his grandson). Sometimes I still dream at night that I am irrigating or harvesting my fruit. The dreams seem so real, so I guess once a farmer always a farmer!"

Looking back on his family's farming legacy, he says, "I hope small family farms survive. They bond families and communities together. It also is a connection in a community as farmers gather and share information and ideas, and the farming community provides a support system when times get tough."

VEGETABLE CROPS

CATEGORY	YEAR	HARVESTED ACRES	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL VALUE	
Beans,	2019	1,363	1.17	1,600	Ton	\$1,106	\$1,770,000	
Succulent	2018	415	1.10	457	Ton	\$900	\$411,000	
Molone All 1	2019	3,836					\$51,490,000	
Meions, All	2018	3,673					\$25,874,000	
Dumpking	2019	267	23.43	6,256	Ton	\$414	\$2,590,000	
Ритркт	2018	471	49.28	23,200	Ton	\$494	\$11,461,000	
Sweet Detatoos	2019	1,903	15.17	28,900	Ton	\$493	\$14,248,000	
Sweet Polatoes	2018	2,020	14.06	28,400	Ton	\$900	\$25,560,000	
Tomatoos All 2	2019	10,216					\$42,493,000	
Tomatoes, All -	2018	8,803					\$34,194,000	
Missellaneous ³	2019	10,638					\$68,403,000	
IVIISCEIIANEOUS	2018	12,715					\$74,046,000	
Total	2019	28,223					\$180,994,000	
10(8)	2018	28,097					\$171,546,000	

1 Melons, All includes: Cantaloupe, Hami, Honeydew, Piel de Sapo, Watermelon

2 Tomatoes, All includes: Fresh, Processing

3 Miscellaneous includes: Asparagus, Beet, Broccoli, Brussels Sprout, Cabbage, Cactus Leaf, Carrot, Cauliflower, Chinese Greens, Cole Crop, Cucumber, Daikon, Edible Flower, Eggplant, Fava Bean, Garlic, Herb-Spice, Kale, Kohlrabi, Lettuce-Head, Lettuce-Leaf, Mustard Greens, Okra, Onion-Dry, Onion-Green, Pea, Pepper, Potato, Radish, Rutabaga, Spinach, Squash-All, Sweet Basil, Swiss Chard, Turnip, Vegetable, Vegetable Leaf

PEST DETECTION EMERGENCY PROJECTS 2019

Focus: Protection of Agriculture and Horticultural industries in Stanislaus County

Traps Placed: 5,347 monitoring for specific pests.

Trap Attractants: Insect pheromone, food bait, color (varies by pest).

Distribution of Traps: 65% in residential yards, 24% in nurseries, 11% in vineyards and orchards.

Trapping allows for early detection of invasive and destructive pests that would be detrimental to the economy, the environment, and public health.

Target pests are shown with corresponding trap. Insect & trap photos are not to scale.



European Corn Borer

Traps Deployed: 8 *Crops Affected*: Corn, green bean, oat, potato, & rhubarb





Japanese Beetle

Traps Deployed: 204 Crops Affected: Roses & turf

Gypsy Moth Traps Deployed: 204 Crops Affected:

Khapra Beetle

Traps Deployed: 0

& grain products

Crops Affected: All grain

Traps will be deployed in

Most trees



Asian Citrus Psyllid (Vector for Huanglongbing Disease)

Traps Deployed: 616 Crops Affected: Citrus

Glassy-Winged Sharpshooter (Vector for Pierce's Disease)

Traps Deployed: 1,933 *Crops Affected:* Almond, citrus, grape, & peach

Apple Maggot

Traps Deployed: 18 *Crops Affected:* Pome & stone fruit





2019 STANISLAUS COUNTY AGRICULTURAL REPORT





Traps Deployed: 221 *Crops Affected:* Apple, apricot, citrus, nectarine, pear, plum, peach, & pomegranate





Red Imported Fire Ant

Traps Deployed: 126 *Crops Affected:* Infests agricultural & residential settings, natural habitats. Dangerous to children, elderly, pets, livestock, & wildlife



Mediterranean Fruit Fly

Traps Deployed: 435 *Crops Affected:* Almond, apple, apricot, citrus, fig, grape, nectarine, olive, peach, pear, plum, pomegranate, tomato, & walnut

Oriental Fruit Fly

Traps Deployed: 435 *Crops Affected:* Apple, citrus, cucumber, fig, grape, pear, pomegranate, stone fruit, tomato, & walnut

Melon Fruit Fly

Traps Deployed: 221 *Crops Affected*: Apple, bean, cantaloupe, cucumber, grape, orange, peach, pear, tomato, & watermelon

Champ Trap (General Fruit Fly) Traps Deployed: 84



Light Brown Apple Moth

Traps Deployed: 435 *Crops Affected*: Alfalfa, almond, apple, berries, broccoli, citrus, corn, grapes, stone fruit, & tomato

European Grapevine Moth

Traps Deployed: 366 Crops Affected: Grapes & spurge laurel

Vine Mealybug

Traps Deployed: 41 Crops Affected: Grapes



WWW.STANAG.ORG

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2019 EXPORT CERTIFICATES

Export Certificates are issued to certify that the commodity meets the plant cleanliness requirements of the importing country

*Not all countries require export certificates

Total Certificates Issued **10,538** to 112 Countries



Top 10 countries exported to in 2019

Other countries exported to in 2019

TOP TEN		COUNTRY	CERTS	COUNTRY	CERTS
United Arab Em	er.993	Afghanistan	11	Belarus	2
Japan	910	Algeria	35	Belgium	114
Spain	804	Argentina	39	Belize	1
Korea, Republi	c of745	Armenia	1	Bolivia	11
Germany	501	Australia	126	Bosnia Herzeg	jovina 8
Turkey	427	Austria	5	Brazil	93
India	404	Azerbaijan	3	Bulgaria	10
Hong Kong	373	Bahamas	1	Canada	57
Italy	369	Bahrain	36	Chad	1
Netherlands	277	Bangladesh	1	Chile	171
		Barbados	4	China	265
				Colombia	31

COUNTRY	CERTS	COUNTRY	CERTS
Costa Rica	21	Finland	1
Croatia	6	France	194
Cyprus	3	French Polynesia	64
Czech Republic	7	Georgia	16
Denmark	13	Greece	38
Dominican Rep.	11	Guatemala	37
Ecuador	20	Guyana	1
Egypt	70	Honduras	24
El Salvador	10	Hungary	2
Estonia	7	Indonesia	118
Ethiopia	3	Iran, Islamic Rep	of 22

сомморіту	PERCENT OF CERTS ISSUED	
Almond	59%	
Walnut	25%	* /
Seed	12%	
Fruit	1%	
Spices	1%	
All Other Combined	2%	

COUNTRY	CERTS	COUNTRY	CERTS	COUNTRY	CERTS	COUNTRY	CERTS	COUNTRY	CERTS
Iraq	34	Libya	11	Nigeria	2	Saudi Arabia	162	Thailand	195
Ireland	17	Lithuania	36	Norway	40	Senegal	1	Trinidad & Toba	ago 7
Israel	219	Malaysia	115	Oman	3	Serbia	2	Tunisia	3
Jamaica	9	Malta	1	Pakistan	60	Singapore	105	Ukraine	17
Jordan	275	Mauritius	4	Panama	14	Slovakia	3	United Kingdor	n 223
Kazakhstan	42	Mexico	236	Peru	96	South Africa	66	Uruguay	4
Kenya	24	Morocco	71	Philippines	33	Sri Lanka	2	Uzbekistan	1
Kuwait	50	Myanmar	1	Poland	14	Sudan	14	Venezuela	1
Kyrgyzstan	1	Nepal	12	Portugal	13	Sweden	22	Vietnam	249
Latvia	18	New Caledoni	a 4	Qatar	29	Switzerland	66	Yemen	17
Lebanon	133	New Zealand	49	North Maced	lonia 2	Syrian Arab Re	ep. 20	Zimbabwe	3
		Nicaragua	7			Taiwan	163		

STANISLAUS COUNTY AG FACTS



AG CENSUS STANISLAUS FARM HIGHLIGHTS

Total Number of Farms: 3,621

-Family Farms: 94%

-Orchard Farms: 64%

Land in Farms: 722,546 Acres

-Individual or Family Owned: 72%

-Orchards: 34%

-Average Size: 200 Acres

-Smallest Single Site: .02 Acres

-Largest Single Site: 850 Acres

Average Age of Stanislaus County Farmer: 59.6

Percent of State Ag Sales: 6%

Source: 2017 U.S. Agriculture Census

RD

PRODUCTION RANK IN CALIFORNIA

Apricots - Squab - Turkey

Dry Beans - Honey - Irrigated Pasture - Nursery Products - Silage

Almonds - Chickens - Peaches

Chicken Eggs - English Walnuts Milk & Cream - Sudan Hay

Cherries - Grain Hay

Stanislaus County Ranks

5th overall in California Ag Sales

Source: 2018-2019 California Agricultural Statistics Review & Squab Producers of California

How Agricultural Values in Stanislaus County Compare to State Totals

United States	\$374,341,092,000
California	\$50,264,375,000
lowa	\$26,605,200,000
Texas	\$22,769,150,000
Nebraska	\$21,315,097,000
Minnesota	\$17,119,482,000
Illinois	\$15,931,846,000
Kansas	\$15,655,934,000
North Carolina	\$11,480,620,000
Wisconsin	\$11,330,883,000
Indiana	\$10,579,799,000
Washington	\$10,246,081,000
Missouri	\$9,882,152,000
South Dakota	\$8,954,744,000
Arkansas	\$8,922,845,000
Georgia	\$8,865,601,000
Hawaii	\$8,865,601,000
Ohio	\$8,481,031,000
North Dakota	\$7,846,655,000
Florida	\$7,642,257,000
Michigan	\$7,339,359,000
Idaho	\$7,206,960,000
Colorado	\$6,723,375,000
Pennsylvania	\$6,721,799,000
Oklanoma	\$6,677,279,000
iviississippi	\$5,652,139,000
Kanaturalini	¢ c c 7 2 0 2 2 0 0 0
Kentucky	\$5,572,923,000 \$5,400,870,000
Kentucky Alabama	\$5,572,923,000 \$5,490,879,000 \$5,212,201,000
Kentucký Alabama New York	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000
Kentucký Alabama New York Oregon Arizona	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000
Kentucky Alabama New York Oregon Arizona	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000
Kentucky Alabama New York Oregon Arizona Stanislaus County	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000
Kentucky Alabama New York Oregon Arizona Stanislaus County Montana	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000
Kentucky Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000
Kentucky Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,054,741,000
Kentucky Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,069,187,000 \$2,954,741,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Mandand	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,069,187,000 \$2,954,741,000 \$2,302,813,000 \$2,304,795,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,069,187,000 \$2,954,741,000 \$2,302,813,000 \$2,194,795,000 \$1,742,929,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,480,910,000 \$3,480,910,000 \$3,473,692,000 \$3,069,187,000 \$2,954,741,000 \$2,302,813,000 \$2,194,795,000 \$1,742,929,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah Wyoming Delaware	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$3,648,192,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,069,187,000 \$2,954,741,000 \$2,302,813,000 \$2,194,795,000 \$1,742,929,000 \$1,440,875,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah Wyoming Delaware New Jersey	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$3,648,192,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,469,187,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,194,795,000 \$1,742,929,000 \$1,440,875,000 \$1,348,273,000 \$1,077,769,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah Wyoming Delaware New Jersey Vermont	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$3,648,192,000 \$3,648,192,000 \$3,480,910,000 \$3,473,692,000 \$3,469,187,000 \$2,954,741,000 \$2,954,741,000 \$2,302,813,000 \$2,194,795,000 \$1,742,929,000 \$1,440,875,000 \$1,348,273,000 \$1,077,769,000 \$812,594,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah Wyoming Delaware New Jersey Vermont West Virginia	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,469,187,000 \$2,954,741,000 \$2,954,741,000 \$2,302,813,000 \$2,194,795,000 \$1,742,929,000 \$1,440,875,000 \$1,348,273,000 \$1,077,769,000 \$812,594,000 \$707,929,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah Wyoming Delaware New Jersey Vermont West Virginia Maine	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,473,692,000 \$3,069,187,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,194,795,000 \$1,742,929,000 \$1,440,875,000 \$1,348,273,000 \$1,077,769,000 \$12,594,000 \$707,929,000 \$702,402,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah Wyoming Delaware New Jersey Vermont West Virginia Maine Nevada	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,473,692,000 \$3,473,692,000 \$3,473,692,000 \$3,473,692,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,194,795,000 \$1,742,929,000 \$1,440,875,000 \$1,348,273,000 \$1,077,769,000 \$12,594,000 \$707,929,000 \$702,402,000 \$658,352,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah Wyoming Delaware New Jersey Vermont West Virginia Maine Nevada Connecticut	\$5,572,923,000 \$5,490,879,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,469,187,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,194,795,000 \$1,742,929,000 \$1,440,875,000 \$1,348,273,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah Wyoming Delaware New Jersey Vermont West Virginia Maine Nevada Connecticut Massachusetts	\$5,572,923,000 \$5,490,879,000 \$5,212,391,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,469,187,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$1,742,929,000 \$1,742,929,000 \$1,348,273,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah Wyoming Delaware New Jersey Vermont West Virginia Maine Nevada Connecticut Massachusetts New Hampshire	\$5,572,923,000 \$5,490,879,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,469,187,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$1,742,929,000 \$1,742,929,000 \$1,348,273,000 \$1,2594,000\$1,2594,000
Kentucký Alabama New York Oregon Arizona Stanislaus County Montana Tennessee Virginia Louisiana New Mexico South Carolina Maryland Utah Wyoming Delaware New Jersey Vermont West Virginia Maine Nevada Connecticut Massachusetts New Hampshire Rhode Island	\$5,572,923,000 \$5,490,879,000 \$4,791,588,000 \$4,747,655,000 \$3,648,192,000 \$3,535,204,000 \$3,480,910,000 \$3,473,692,000 \$3,469,187,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$2,954,741,000 \$1,742,929,000 \$1,742,929,000 \$1,440,875,000 \$1,348,273,000\$1,348,273,000 \$1,348,273,000\$1,348,273,000\$1,3

Source: United States Department of Agriculture Economic Research Service 2018 Farm Income and Wealth Statistics

SPOTLIGHT ON THE NEXT GENERATION:

Stanislaus County 4-H & FFA Programs





The University of California Cooperative Extension facilitates the 4-H programs in Stanislaus County. Nationally, 4-H is America's largest youth development organization. Members of 4-H range in age from nine to 18 years old (a primary program is available for members as young as five as well) and complete hands-on projects in areas such as health, science, agriculture, and civic engagement in positive environments where they receive guidance from adult mentors and are encouraged to take on proactive leadership roles. There are many opportunities for involvment, such as fairs, camps, leadership conferences, judging competitions, fashion shows, engineering events, guide dog training, and many more. If you would like to join a local 4-H club call the Stanislaus County Cooperative Extension at (209) 525-6801, or visit their website at https://ucanr.edu/sites/Stanislaus4-H/.

Students in eighth grade through one year after high school graduation that are or were previously enrolled in an agriculture program are eligible to become FFA (formerly Future Farmers of America) members. The FFA program prepares members for premier leadership, personal growth and career success through agricultural education. Members can be involved with fairs, camps, judging teams, public speaking competitions, leadership events, and much more. FFA members can develop their own unique talents and explore their interests in a broad range of agriculture career pathways through this program. Contact your local school for more information on FFA programs available in Stanislaus County.

STANI SLAUS COUNTY FARM BUREAU FEATURING YOUNG FARMERS + RANCHERS





STANISLAUS COUNTY YOUNG FARMERS & RANCHERS

"For the good of your food" is the new motto for the Stanislaus County Farm Bureau (FB) and their subsidiary group, Young Farmers and Ranchers (YFR). The Stanislaus County FB is the local chapter of the California Farm Bureau Federation.

Members of YFR are FB members between the ages 18 and 35. While FB focuses primarily on public policy, YFR additionally tackles issues specifically relating to younger members in the agriculture industry. The program helps develop leadership skills, assists with job hunting and loans while also providing networking, industry tours and outreach. Community service is also a feature of the YFR group. Every year the group purchases a pig at the Stanislaus County Fair, and donates the meat to the Gospel Mission, and they also sponsor seven families at Christmastime.

FB and YFR serve as a voice in the industry, the community, and especially at all levels of government to protect the rights of farmers, ranchers and landowners, provide programs to assist its farm members and educate the general public about the importance of agriculture. They "Protect, Promote, Educate, and Advocate" to ensure a bright future in agriculture for generations to come. More information is available at https://www.cfbf.com/countyfb/stanislaus/

LOCAL AG AWARDS:

STANISLUAS COUNTY FARM BUREAU DISTINGUISHED SERVICE AWARD 2019 RECIPIENT: TIM SANDERS

A longtime member of the Stanislaus Farm Bureau, Ceres-area almond farmer Tim Sanders has served as stalwart representative for the local agricultural community. Sanders has volunteered himself to numerous causes through the Farm Bureau and the Turlock Exchange Club. He has served as a Stanislaus Water Advisory Board member, as well as a Farm

Bureau Director and committee chair for the Bureau's youth camp, Camp Sylvester. True to the Exchange Club's Mission, Sanders continues to work diligently to make the community a better place to live through his volunteering and commitment to the values of honesty, hard work, and respect for all people instilled in him by his father.



Photo Credit: Modesto Bee

National Ag Science Center Hall Of Fame 2019 Recipient: **ETCHEBARNE DAIRY CONSULTING**

Two generations of the Etchebarne family continue to dedicate themselves to the dairy industry not only in Stanislaus County and nearby areas, but across the US as well.

Etchebarne Dairy Consultants are known for their unbiased and whole-picture management approach, by advocating best farm practices in feeding and herd health while promoting excellence in reproduction and competitive milk performance. Utilizing the latest science and proven techniques, Etchebarne Dairy Consulting continues to improve the efficiency and performance of numerous dairies nationwide.



Photo Credit: Etchebarne Dairy Consulting

UCUniversity of CaliforniaCECooperative Extension Advisors

Many people in agricultural communities know about the University of California Cooperative Extension office whether it be via farm calls, newsletters, field days, educational meetings, 4-H or UC CalFresh. At the Stanislaus County office, we have eight advisors, some of which cover multiple counties. These advisors specialize in dairy, pomology, viticulture, livestock and rangelands, nutrient management and soil quality, vegetable crops and 4-H. Did you know we do research too? Almond growers benefit greatly from information provided by Roger Duncan's variety and rootstock trials while Jennifer Heguy currently focuses on the dairy industry's contribution to environmental stewardship through by-product feeding practices. Theresa Becchetti, our livestock and natural resource advisor studies invasive weed management, grazing for fuels reduction, youth education on rangelands and anaplasmosis status in her respective counties. Anthony Fulford, our nutrient management/soil quality advisor, is assessing edge-offield conservation practices and their impact on soil carbon sequestration, nutrient characterization of dairy manures, and nitrogen availability from fall-applied compost. Jhalendra Rijal, our integrated pest management advisor, spends much of his time studying brown marmorated stinkbug damage on almonds and peaches, and pacific flat headed bore in walnuts. Zheng Wang, our vegetable crop advisor, focuses on grafting of vegetable crops for control of soil borne pathogens. This topic can be read in greater

detail in his article "Approach to Vegetable Grafting: A Practice with the Value of Recombination." Emma Fete, our 4-H advisor, centers much of her effort on leader training to provide opportunities for valuable skill-building for volunteers to use outside of 4-H, including in their careers.

Kari Arnold, the author of this article, is a pomology and viticulture advisor focusing on walnuts, cherries, grapes and apricots. My research efforts focus on the establishment and sustainability of the orchard and vineyard. Two projects of note involve delayed irrigation and the integration of rootstocks and spacing for walnut orchards.



I am involved in several other projects on cherries, apricots and grapes in addition to overseeing the new Stanislaus County UCCE Master Gardener Program. Feel free to give me a call sometime so we can talk trees and vines.

Kari Arnold-

UCCE Area Orchard and Vineyard Systems, Stanislaus County

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Delayed Irrigation In Walnuts

Recent research shows that walnut orchards do not appear to need applied water until later in the season, depending on the stem water potential (SWP) of the trees. Additionally, orchards with delayed irrigation show less stress in the fall. Yield data in both the current and previous year have shown no significant difference between the delayed irrigation treatment and the grower standard. Additionally, trees that were declining in previous years now appear to be recovering in the delay treatment. My delayed irrigation project is in collaboration with Prof. Kenneth Shackel, who specializes in irrigation studies in the Plant Sciences Department at UC Davis, Bruce Lampinen, Walnut Specialist, and Allan Fulton, Irrigation Advisor in Tehama County. My site (Stanislaus County) is a sister study to a northern location (Tehama County), providing regional information for the central portion of California.



Integration of Row Spacing, Tree Spacing, and Rootstocks for Walnut Production

Many walnut growers have been planting high density orchards over the last twenty years to increase early yields (more trees, more nuts) and save labor by mechanically hedging trees once mature. Unfortunately, recent research shows the loss of light penetration due to a denser canopy reduces yield and quality. Increased vigor of clonal rootstocks may also lead to an even denser canopy than before leading to lower quality/value nuts in later years. The question stands, is it more economical to plant less trees? In the study, Paradox seedling (industry standard), RX1 and VX211 (clonal UC releases) rootstocks are planted at three different spacings (22'x22', 26'x26' and 30'x30') in a randomized block design. The project is in its fourth year and significant differences in rootstock and spacing are already becoming apparent. More information is coming soon.

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UCApproach to Vegetable Grafting:CEPractice With the Value of Recombination

Grafting woody crops to pursue the synergy of rootstock and scion has become a standard practice. This is also true for vegetable grafting that creates a recombined seedling from two different types of varieties with the initial motivation of providing the new plant disease resistance while maintaining or increasing fruit yield. Vegetable grafting as an ancient practice is now becoming routine in many Asian and European countries as well as in large-scale greenhouse vegetable industry. Although the U.S. farmers and researchers have collaborated on an increasing number of on-farm evaluations since the last ten years, vegetable grafting remains a new concept for many vegetable growers regarding its fundamentals. The ten most frequently asked questions about vegetable grafting are summarized from the interactions with vegetable growers and producers from our county and other area.

1. What vegetable crops can be grafted? The short answer is fruiting vegetables. Solanaceous and Cucurbitaceae vegetables, such as tomato, pepper, eggplant, melon, cucumber, watermelon, and squash, are commonly graftable commodities.

2. Why grafting? As mentioned earlier, the initial purpose is to combat soil-borne diseases. The prohibition and reduction of pesticide use, weakness of traditional variety development (e.g., time-consuming, inability to contain all desired traits), and shortness on arable lands are the driving forces of vegetable grafting. Re-connecting the commercial variety (scion) with limited or no disease resistance onto a rootstock whose root is specifically bred for soil-borne diseases can help maintain plant productivity and health. In addition, with more rootstocks being available, use of vegetable grafting has been expanded to increase crop yield, nutrient and water use efficiency, and tolerance to abiotic stresses (e.g., drought, cold, and salt).





3. What are the general differences between growing a grafted and regular plant? The differences start at the seeding stage. First, more greenhouse space is needed for rootstock plant growth. Sometimes, rootstock seeds are sowed at a different time from commercial varieties to match their stem diameter at grafting. Second, grafted plants require a longer time before introducing into fields than non-grafted plants because they need to be healed after grafting for 7-10 days in a high humidity chamber. Third, the graft union is supposed to be kept above the soil surface at transplanting to avoid scion root growth. Fourth, grafted plants may have extended vegetative growth resulting in a possible delay on fruit maturation and harvest. Therefore, harvest schedules and yield at each harvest may be different from what we have experienced with non-grafted plants.

4. What are the general grafting methods and are they the same for different vegetable crops? There are various methods of grafting a vegetable plant, and yes, they are different among crops. Please refer to the Grafting Manual at http://www.vegetablegrafting.org/resources/ grafting-manual/ for crop-specific grafting methods.

5. It is hard to find a commercially available rootstock. How do I know what are currently available? Knowing where to find the information is the first step in choosing the correct rootstock for grafting. National efforts involved ten U.S. institutions aimed at increasing the adoption of vegetable grafting among U.S. vegetable industry. This team, under the support of USDA, established a website on which commercially available rootstocks are listed. The rootstock tables are updated periodically. Please check http://www.vegetablegrafting. org/resources/rootstock-tables/ to access the tables.

6. Will grafting affect the fruit flavor? Frankly, there is no absolute answer to how grafting will change fruit flavor so far. In tomatoes, many studies have found a lower fruit sugar content (°Brix), but this may be attributed to the higher yield of grafted fruit that "dilute" the sugar content. For melon and watermelon, on the other hand, researchers have investigated the impact of rootstocks bred for flavor on fruit quality after grafting. Higher contents of sugar and other compounds that are key for body health have been detected in grafted fruit. Overall, it is hard to tell if the flavor change is welcome or not; let alone we still cannot assert that grafting will change the fruit flavor.



7. Are we going to have larger/heavier fruit after grafting? There are two possibilities regarding the increase of fruit yield from grafted plants. One, there are more fruit per plant from grafted plots without a change of individual fruit size/weight. Two, fruit produced from grafted plants are bigger and heavier but without a change of total number. Generally, increase in fruit size is more an issue for watermelon than other vegetables. Oversized watermelon with average weight over 26 lbs. hardly has its market. We hope grafted plants can distribute more energy on producing more fruit than producing larger fruit.

8. I have been to your watermelon grafting Field Days last year. Besides watermelon, are you conducting any other grafting research? Besides the watermelon grafting trial, I have been collaborating with UCCE farm advisors from San Joaquin and Yolo counties to evaluate performance of grafted processing tomatoes since 2018. In 2020, I will partner with commercial processing tomato growers in Stanislaus and San Joaquin counties to continue the evaluation trials. In addition, the watermelon grafting trial will be repeated in 2020 at Turlock.



9. Do you expect different rootstock-scion combinations to have similar results? The answer is no. Demonstrating which combinations will have steadily positive effects and finding out the interactions among rootstocks are the main purposes of these trials. Previous experience indicated that not every commercial cultivar is suitable for grafting, or that they may only fit certain rootstocks. Quality, yield, and other parameters may become weak after grafting.

10. What messages are you going to deliver through these trials? The merits of grafting are well-recognized; however, the cost is the biggest barrier of widespread adoption. Reducing the cost while maintaining crop yield and fruit quality is the key incentive to keep grafting as an attractive approach. Reducing plant population is considered as a method to save the cost on grower's end. We hope to find the balance between population reduction and fruit yield and quality/marketability in order to keep grafting in the grower's toolbox as a credible practice

Besides working on vegetable grafting, I am also leading and collaborating a number of projects on basil weed control, compost, tomato pest and disease management, and crop biostimulant evaluation.

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AGRICULTURAL COMMISSIONER PROGRAMS

PEST EXCLUSION:

- Interior Pest Exclusion
 - Enforcement of quarantines, inspection of packages, phytosanitary certification of exports
- Exterior Pest Exclusion
 - Enforcement of quarantines for materials subject to infestation that have crossed into California with a Stanislaus County destination
- Nursery and Seed
 - Licensing, pest cleanliness inspections, registration & certification, truth in labeling & quality, soil & plan laboratory permitting
- Noxious Weed Survey
 - Sampling of weeds & survey of their locations within the county

PEST DETECTION:

- Early detection of insect pests
- Administering specific "action plans" for unwanted agricultural pests
- Maintaining properly trained & equipped pest detection teams

SEED CERTIFICATION:

- Inspect retail & wholesale seed sellers
- Obtain samples for seed germination & purity testing
- Labeling inspections for compliance with state requirements
- Certification services for growers & processors in cooperation with the California Crop Improvement Association

NURSERY INSPECTION:

• Inspections of growing, propagation, production & sale sites of nursery stock to assure cleanliness from pests, true variety & vigorous healthy plants for sale to the consumer

INDUSTRIAL HEMP:

• Registration, inspection, and sampling of industrial hemp cultivation sites to ensure compliance with state requirements

APIARY INSPECTION:

- Registration of site location of honeybee colonies in the county
- Colony strength & health inspections

PESTICIDE USE ENFORCEMENT:

- Provides for the proper, safe, & effective use of pesticides for agricultural production & protection of public health & safety
- Prohibiting, regulating or ensuring proper stewardship of pesticides for environmental protection
- Ensuring safe working conditions, use of proper protective equipment & training for employees working with or around pesticides
- Pesticide use reporting, incident investigations, outreach activities, & monitoring applications

FRUITS, NUTS & VEGETABLE STANDARDIZATION:

- Compliance of California's minimum standards for quality & marketing produce commercially grown &/or marketed in the state
- Direct Marketing, Certified Producers & Certified Farmers Markets inspection & enforcement
- Organic law enforcement
- Local protection to growers, marketers & consumers

CROP STATISTICS:

- Annual agricultural report regarding the gross production & value of the county's commodities
- Agriculture disaster surveys used by other agencies offering disaster relief

PEST ERADICATION:

- Local government liaison to CDFA after a pest species is discovered
- Eradication of discovered invasive or exotic pest species

PEST MANAGEMENT:

- Managing nuisance pests of agriculture & human health
- Programs include glassy-winged sharpshooter, ground squirrels, capeweed, etc.

WEIGHTS & MEASURES PROGRAMS

DEVICES:

- Annually inspects commercial weighing and measuring devices to ensure they are correct
- Examples of commercial devices include livestock scales, vehicle scales, propane delivery trucks, fuel dispensers, deli scales, & taxi meters

QUANTITY CONTROL:

- Determine proper weight, measure, or count of packaged goods
- Ensure package labeling requirements
- Ensure pricing accuracy at the checkout

PETROLEUM:

• Enforce requirements for petroleum product quality, labeling & advertising

WEIGHMASTER:

- Persons licensed to certify the weighed, measured, or counted quantity of any commodity are weighmasters
- Inspectors assure that commercial transactions certified on a Weighmaster Certificate are accurate

SERVICE AGENTS:

• Review the work of licensed persons that sell, rent, install, service or repair commercial weighing and measuring devices to validate the accuracy of their work & to verify the appropriate use of commercial devices

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You Fill Our Hearts and Our Plates Thank You!

Photo Courtesy of Tommy Van Groningen