

Table 1. Number of participants per cohort.

Cohort Number	Year of Course	Number of Participants
1	2012	45
2	2013	40
3	2014	38
4	2015	41
5	2016	41
6	2017	35
7	2018	32
¹ 8	2019	30
	2020	CANCELLED
9	2021	--- TBD---
Total participants		302

¹ Cohort data in which I presented in this application.

Table 2. The University of California Cooperative Extension, 2019 eight-week Avocado Production Course survey results for the major learning objectives and overall experience of the course shown in mean values and standard deviations.

¹ Survey Questions	Major Learning Objectives									
	Avocado Production Methods (n=30)		Irrigation (n=26)		Grafting and Pests (n=28)		Fertilizing (n=29)		Course Overall (n=30)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
I gained knowledge as a result of this course.	4.88 ²	4.53	4.85	4.88	4.79	4.85	4.83	4.81	5	5
I will use/implement at least one idea I learned about as a result of this course.	4.85	4.85	4.81	4.88	4.69	4.81	4.79	4.77	4.97	4.98
I plan to tell others about this course.	4.88	4.88	4.92	4.92	4.66	4.88	4.76	4.74	4.97	4.98
Overall, this course was valuable for my time.	4.88	4.88	4.89	4.96	4.69	4.88	4.79	4.77	4.97	4.98
Course has improved my knowledge and learning behavior that I can use to improve orchard efficiency, productivity and profitability, improve water and use of land efficiency, and increase ecological sustainability.	4.88	4.92	4.96	4.84	4.79	4.92	4.93	4.90	4.97	4.98

¹ Survey results were taken from the 8th cohort in 2019.

²Level of understanding, 1= very low, 5= very high.

Table 3. California avocado producing acreage (2012, 2016, and 2020) and number of newly planted acreage per top five producing counties (2012, 2016, 2020).¹

County	² Producing Acres			³ Newly planted/Young Acres		
	2012	2016	2020	2012	2016	2020
San Diego	20,435	15,000	14,421	512	561	783
Riverside	6,167	4,142	4,335	191	630	446
Ventura	16,905	15,724	17,056	838	1,382	1,825
Santa Barbara	5,801	4,267	5,828	224	484	629
San Luis Obispo	4,251	3,269	3,894	89	491	82
Top Five Producing Counties Total	53,559	42,403 (- 11,156)	45,534 (+ 3,131)	1,854	3,548 (+ 1,694)	3,766 (+ 2,072)

¹Data was collected from the California Avocado Commission website (CAC) (2021).

²Groves that are greater than 4 years old.

³Groves that are 4 years old or younger.

Table 4. California avocado production volume, crop value, and historical grower hardships that could have potentially reduced yield, organized by season. (2010 – 2019)¹

Year (growing season) ²	Volume (millions of pounds)	Crop Value (\$)	Average Dollars Per Bearing Acre (\$)	Historical Grower Hardships ³
2010 - 2011	57,532	\$460,209,682	\$7,999	
2011 - 2012	59,629	\$381,852,467	\$6,904	Water prices increased to \$1,200 per acre foot in San Diego County
2012 - 2013	57,838	\$435,023,142	\$7,521	
2013 - 2014	57,219	\$333,216,563	\$5,823	Water prices increased to \$1,600 per acre foot in San Diego County
2014 - 2015	51,478	\$303,160,400	\$5,889	Unanticipated snow storm/freeze snap hits southern region
2015 - 2016	51,902	\$412,332,493	\$7,944	Water prices increased to \$1,800 per acre foot in San Diego County
2016 - 2017	50,856	\$345,875,896	\$6,801	Thomas wildfire raged through central coast (Ventura County) for months destroying bearing acreage and damaging (smoke/ash) surviving trees and fruit in the area.
2017 - 2018	49,986	\$383,129,253	\$7,665	Three-day heat wave in the southern and central coast region, temperatures reached 118-120°F.
2018 -2019	47,159	\$372,285,783	\$7,894	
2019 - 2020			\$8,930	

¹Data source from the CAC (2021).

²Avocado trees have a tendency to adopt an alternate bearing cycle — an on-crop/off-crop cycle across two years that results in a large crop of small avocados in one year, followed by small crop of large avocados the next year.

³January 2, 2015 a major snow storm hit southern California (CAC 2015); December 3, 2017, the Thomas fire raged through the central coast destroying approximately 6,600 acres of avocado acreage (does not include smoke or ash damage to surviving trees and fruit) (Ventura Farm Bureau); July 2018 an excessive, record breaking heat wave hit the southern and central coast

growing regions for three days at 118-120°F. The heat-affected areas totaled more than 14,000 acres which was identified as producing acreage (Ag Alert 2018); January 2021, documentation of high wind damage. Winds as much as 46 mph, with gusts to 59 mph, were recorded in Camarillo (Ventura Co.) and it is estimated growers in San Diego County lost about ~20% of their crop (Ventura/San Diego Farm Bureau 2021).