

Budget Record #55 - 58

1982

## SAMPLE PRODUCTION COSTS

1st-4th Year Establishment Costs for Zutano Avocados

TULARE, FRESNO & KINGS COUNTIES

by

J. LaRue, Tulare Co., F. Yoshikawa, Fresno Co., & B. Beede, Kings Co., Farm Advisors

and

P. Thomas, Staff Research Associate, Farm Management, U. C. Davis

Costs given in this sample study are for those of a typical well managed orchard and are not intended to reflect an average of all orchards in Tulare, Fresno and Kings Counties.

It is assumed this study is based upon a 10 acre block out of a 40 acre total fruit orchard. The same machinery, pump and some other costs are shared on the whole orchard.

Practices listed are based on those considered typical production procedures. Sample costs given for labor, materials, equipment and contract services are based on 1981 figures. Interest and depreciation are based upon the cost of new equipment and a recent land purchase. Not all costs or practices may be incurred in your situation but should be used as a guide only.

Additional output is available upon your request, including machine calling summary, fuel use summary and a stored data page (input information).

Calculations used by the computer may be further explained by calling the Budget Generator Manager, University of California, Davis, California (916) 752-6705.

**COST & RETURNS SUMMARY FOR AVOCADOS**  
**1ST YEAR ESTABLISHMENT COSTS FOR ZUTANO AVOCADOS**  
**TULARE AND FRESNO COUNTIES - ROLLING HILLS 1981**  
**BY J. LARUE AND F. YOSHIKAWA, FARM ADVISORS - P. THOMAS, SRA**

	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST PER ACRE	YOUR COST
<b>1. GROSS RECEIPTS FROM PRODUCTION:</b>					
TOTAL RECEIPTS:				0.00	
<b>2. VARIABLE COSTS:</b>					
<b>PREHARVEST:</b>					
LEVELING -MACH.	hour	60.000	1.000	60.00	
LEVELING -LABOR	hour	5.000	8.000	40.00	
TREES	tree	8.000	90.000	720.00	
CONTRACT PLANT	tree	1.750	90.000	157.50	
FILL WRAPS	acre	20.000	1.000	20.00	
NITROGEN	lbs.	0.350	15.000	5.25	
PRE-EMERGE HERB.	acre	15.000	1.000	15.00	
WEED CONTROL-RAT	acre	24.000	1.000	24.00	
MISC. LABOR	hour	5.000	5.004	25.02	
EQUIPMENT (FUEL-LUBE-REPAIRS)	acre			112.02	
BUILDINGS (FUEL-LUBE-REPAIRS)	acre			5.10	
IRRIGATION (POWER-LUBE-REP)	acm	11.288	2.520	28.45	
MACHINERY LABOR	hour	5.650	23.297	131.63	
MACHINE CREW LABOR	hour	5.650	3.857	21.79	
IRRIGATION LABOR	hour	5.650	6.300	35.60	
INTEREST ON OPERATING CAP.	dol.	0.14000	827.814	113.26	
<b>TOTAL PREHARVEST COSTS:</b>				<b>1514.61</b>	
<b>HARVEST:</b>					
TOTAL HARVEST COSTS:				0.00	
<b>TOTAL VARIABLE COSTS:</b>				<b>1514.61</b>	
<b>3. INCOME ABOVE VARIABLE COSTS:</b>					
					-1514.61
<b>4. OVERHEAD:</b>					
PERSONAL PROPERTY TAXES:				9.89	
REAL PROPERTY TAXES:				70.00	
MISC. OFFICE & BOOKKEEPING ( 2.50% OF TOTAL VARIABLE COSTS)				37.82	
<b>TOTAL OVERHEAD:</b>				<b>117.76</b>	
<b>TOTAL CASH COSTS:</b>				<b>1632.37</b>	
<b>5. INCOME ABOVE ALL CASH COSTS:</b>					
					-1632.37
<b>6. OWNERSHIP COSTS:</b>					
<b>DEPRECIATION:</b>					
MACHINERY & EQUIPMENT	acre			42.85	
IRRIGATION SYSTEM	acre			7.35	
BUILDINGS	acre			25.90	
<b>TOTAL DEPRECIATION:</b>				<b>76.11</b>	
<b>CAPITAL &amp; INTEREST:</b>					
MACHINERY&EQUIPMENT		0.14000	270.111	37.82	
IRRIGATION SYSTEM		0.14000	81.284	11.38	
BUILDINGS		0.10670	447.131	47.71	
LAND		0.10670	7000.000	246.90	
<b>TOTAL INTEREST CHARGE:</b>				<b>843.80</b>	
<b>TOTAL FIXED COSTS:</b>				<b>919.91</b>	
<b>7. TOTAL OF ABOVE COSTS:</b>					
					2552.28
<b>8. NET RETURNS:</b>					
					-2552.28

10 ACRES AVOCADOS ON 40 ACRE FARM - OTHER ACREAGE USUALLY CITRUS  
 FOGGER/MISTER IRRIGATION SYSTEM - WELL WATER  
 LANDOWNER BASIS  
 DATE PRINTED: 01/22/82

CASH FLOW & INVESTMENT SUMMARY FOR AVOCADOS

BUDGET RECORD NUMBER 55

1ST YEAR ESTABLISHMENT COSTS FOR ZUTANO AVOCADOS  
 TULARE AND FRESNO COUNTIES - ROLLING HILLS 1981  
 BY J. LARUE AND F. YOSHIKAWA, FARM ADVISORS - P. THOMAS, SRA

MONTHLY SUMMARY OF RECEIPTS AND EXPENSES

CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	T
TOTAL RECEIPTS	\$/AC													0.00
OPERATING EXPENSES														
LEVELING -MACH.	\$/AC			60.00										60.00
LEVELING -LABOR	\$/AC			40.00										40.00
TREES	\$/AC				720.00									720.00
CONTRACT PLANT	\$/AC				157.50									157.50
FILL WRAPS	\$/AC											20.00		20.00
NITROGEN	\$/AC					1.05	1.05	1.05	1.05	1.05				5.25
PRE-EMERGE HERB.	\$/AC												15.00	15.00
WEED CONTROL-MAT	\$/AC					4.80	4.80	4.80	4.80	4.80				24.00
MISC. LABOR	\$/AC	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	25.02
MACHINE LABOR COST	\$/AC	9.15	9.15	9.15	9.15	16.42	16.42	16.42	16.42	16.42	9.15	9.15	16.42	153.42
INTEREST ON OPER. CAP.	\$/AC	2.52	2.28	12.37	82.18	3.37	3.22	2.67	2.12	1.52	0.55	0.46		113.26
EQUIPMENT COST	\$/AC	8.09	8.09	8.09	8.09	10.58	10.58	10.58	10.58	10.58	8.09	8.09	10.58	112.02
BLDG OPER. COST	\$/AC	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	5.10
IRRIGATION COST	\$/AC				1.35	3.16	5.42	5.42	5.42	4.52	2.26	0.90		28.45
IRRIG LABOR COST	\$/AC				1.69	3.95	6.78	6.78	6.78	5.65	2.83	1.13		35.60
TOTAL EXPENSES	\$/AC	22.28	22.04	132.12	982.49	45.84	50.77	50.22	49.67	47.03	25.39	42.25	44.50	1514.61

MONTHLY IRRIGATION AND LABOR REQUIREMENTS

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	T
MACHINE LABOR	HR/AC	1.62	1.62	1.62	1.62	2.26	2.26	2.26	2.26	2.26	1.62	1.62	2.26	23.30
MACH. CREW LABOR	HR/AC					0.64	0.64	0.64	0.64	0.64			0.64	3.86
IRRIGATION LABOR	HR/AC				0.30	0.70	1.20	1.20	1.20	1.00	0.50	0.20		6.30
IRRIG. WATER APPLIED	ACIN				0.12	0.28	0.48	0.48	0.48	0.40	0.20	0.08		2.52

MACHINERY FIXED AND VARIABLE COSTS PER ACRE

MACHINE	CODE	SIZE	PURCHASE PRICE	YEARS OWNED	ANN HOURS USED	FIXED COST PER ACRE			VARIABLE COST PER ACRE				HRS PER ACRE	
						DEPR.	INTER.	TAX & INS	TOTAL	FUEL	LUBE	REPAIRS		TOTAL
PICKUP 1/2 TON	14	0.5	10000.	7.	435.	36.69	30.30	7.76	74.75	72.00	10.80	12.22	95.02	15.000
3-WHEEL HONDA	15	1.0	1200.	7.	100.	1.28	1.39	0.32	2.99	1.80	0.27	0.04	2.11	1.200
WELL PUMP 10HP*	21	0.1	2300.	20.	1540.	1.38	2.13	0.65	4.15	13.40	0.20	1.83	15.44	19.385
WEED SPRAYER	37	22.0	8000.	15.	320.	4.88	6.13	1.81	12.81	2.78	0.42	11.70	14.89	3.214
MISTER IRIG SYS*	56	0.1	10000.	20.	1540.	5.98	9.25	2.83	18.06	0.00	0.26	12.75	13.01	19.385
FARM SHOP	1		4500.	35.		11.57	26.41	4.50	42.48	4.50		0.19	4.69	
TOOLS-SHOP EQUIP	4		3071.	15.		14.33	21.30	3.07	38.70	0.00		0.41	0.41	

MACHINERY & EQUIPMENT 3907.  
 INVESTMENT & COSTS PER ACRE 76.11 96.90 20.95 193.95 94.48 11.94 39.15 145.57  
 TOTAL INVESTMENT 39071.

10 ACRES AVOCADOS ON 40 ACRE FARM - OTHER ACREAGE USUALLY CITRUS  
 FOGGER/MISTER IRRIGATION SYSTEM - WELL WATER  
 LANDOWNER BASIS  
 DATE PRINTED: 01/22/82

UPDATED 01/22/82

**COST & RETURNS SUMMARY FOR AVOCADOS**  
**2ND YEAR ESTABLISHMENT COSTS FOR ZUTANO AVOCADOS**  
**TULARE AND FRESNO COUNTIES - ROLLING HILLS 1981**  
**BY J. LARUE AND F. YOSHIKAWA, FARM ADVISORS - P. THOMAS, SRA**

	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST PER ACRE	YOUR COST
<b>1. GROSS RECEIPTS FROM PRODUCTION:</b>					
<b>TOTAL RECEIPTS:</b>				-----	<b>0.00</b>
<b>2. VARIABLE COSTS:</b>					
<b>PREHARVEST:</b>					
TREES	TREE	8.000	2.000	16.00	
REPLANT LABOR	HOURL	5.000	1.000	5.00	
NITROGEN	LBS.	0.350	30.000	10.50	
PRE-EMERGE HERB.	ACRE	15.000	1.000	15.00	
WEED CONTROL-RAT	ACRE	7.500	1.000	7.50	
ZINC SULFATE	LBS.	0.285	7.000	2.00	
ZINC-HELICOPTER	ACRE	25.000	1.000	25.00	
MISC. LABOR	HOURL	5.000	5.004	25.02	
EQUIPMENT (FUEL-LUBE-REPAIRS)	ACRE			102.09	
BUILDINGS (FUEL-LUBE-REPAIRS)	ACRE			5.10	
IRRIGATION (POWER-LUBE-REP)	ACIN	9.242	5.020	46.40	
MACHINERY LABOR	HOURL	5.650	20.726	117.10	
MACHINE CREW LABOR	HOURL	5.650	1.286	7.26	
IRRIGATION LABOR	HOURL	5.650	6.300	35.60	
INTEREST ON OPERATING CAP.	DOL.	0.14000	187.711	25.60	
<b>TOTAL PREHARVEST COSTS:</b>				-----	<b>445.17</b>
<b>HARVEST:</b>					
<b>TOTAL HARVEST COSTS:</b>				-----	<b>0.00</b>
<b>TOTAL VARIABLE COSTS:</b>				-----	<b>445.17</b>
<b>3. INCOME ABOVE VARIABLE COSTS:</b>					<b>-445.17</b>
<b>4. OVERHEAD:</b>					
PERSONAL PROPERTY TAXES:					8.69
REAL PROPERTY TAXES:					70.00
MISC. OFFICE & BOOKKEEPING ( 2.50Z OF TOTAL VARIABLE COSTS)				-----	11.13
<b>TOTAL OVERHEAD:</b>					<b>89.81</b>
<b>TOTAL CASH COSTS:</b>					<b>534.98</b>
<b>5. INCOME ABOVE ALL CASH COSTS:</b>					<b>-534.98</b>
<b>6. OWNERSHIP COSTS:</b>					
<b>DEPRECIATION:</b>					
MACHINERY & EQUIPMENT	ACRE				39.60
IRRIGATION SYSTEM	ACRE				14.65
BUILDINGS	ACRE			-----	25.90
<b>TOTAL DEPRECIATION:</b>					<b>80.15</b>
<b>CAPITAL &amp; INTEREST:</b>					
MACHINERY&EQUIPMENT		0.14000	240.925		33.73
IRRIGATION SYSTEM		0.14000	161.922		22.67
BUILDINGS		0.10670	447.131		47.71
LAND		0.10670	7000.000	-----	746.90
<b>TOTAL INTEREST CHARGE:</b>					<b>851.01</b>
<b>TOTAL FIXED COSTS:</b>					<b>931.16</b>
<b>7. TOTAL OF ABOVE COSTS:</b>					<b>1466.14</b>
<b>8. NET RETURNS:</b>					<b>-1466.14</b>

10 ACRES AVOCADOS ON 40 ACRE FARM - OTHER ACERAGE USUALLY CITRUS  
 FOGGER/MISTER IRRIGATION SYSTEM - WELL WATER  
 LANDOWNER BASIS  
 DATE PRINTED: 02/19/82

UPDATED 02/19/82  
 BUDGET RECORD NUMBER 56

CASH FLOW & INVESTMENT SUMMARY FOR AVOCADOS

BUDGET RECORD NUMBER 56

2ND YEAR ESTABLISHMENT COSTS FOR ZUTANO AVOCADOS  
TULARE AND FRESNO COUNTIES - ROLLING HILLS 1981

BY J. LARUE AND F. YOSHIKAWA, FARM ADVISORS - P. THOMAS, SRA

MONTHLY SUMMARY OF RECEIPTS AND EXPENSES

CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
TOTAL RECEIPTS	\$/AC													0.00
<b>OPERATING EXPENSES</b>														
TREES	\$/AC				16.00									16.00
REPLANT LABOR	\$/AC				5.00									5.00
NITROGEN	\$/AC					2.10	2.10	2.10	2.10	2.10				10.50
PRE-EMERGE HERB.	\$/AC												15.00	15.00
WEED CONTROL-RAT	\$/AC			7.50										7.50
ZINC SULFATE	\$/AC					2.00								2.00
ZINC-HELICOPTER	\$/AC					25.00								25.00
MISC. LABOR	\$/AC	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	25.02
MACHINE LABOR COST	\$/AC	9.15	9.15	16.42	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	16.42	124.36
INTEREST ON OPER. CAP.	\$/AC	2.52	2.28	3.82	4.08	4.61	2.53	2.10	1.67	1.16	0.58	0.25		25.60
EQUIPMENT COST	\$/AC	8.09	8.09	10.58	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.09	10.58	102.09
BLDG OPER. COST	\$/AC	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	5.10
IRRIGATION COST	\$/AC				2.22	5.18	8.78	8.87	8.78	7.39	3.70	1.48		46.40
IRRIG LABOR COST	\$/AC				1.69	3.95	6.78	6.78	6.78	5.65	2.83	1.13		35.60
TOTAL EXPENSES	\$/AC	22.28	22.04	40.82	48.75	62.59	39.95	39.61	39.09	36.06	26.86	22.61	44.50	445.17

MONTHLY IRRIGATION AND LABOR REQUIREMENTS

MACHINE LABOR	HR/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MACHINE LABOR	HR/AC	1.62	1.62	2.26	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	2.26	20.73
MACH. CREW LABOR	HR/AC			0.64									0.64	1.29
IRRIGATION LABOR	HR/AC				0.30	0.70	1.20	1.20	1.20	1.00	0.50	0.20		6.30
IRRIG. WATER APPLIED	ACIN				0.24	0.56	0.95	0.96	0.95	0.80	0.40	0.16		5.02

MACHINERY FIXED AND VARIABLE COSTS PER ACRE

MACHINE	CODE	SIZE	PURCHASE PRICE	YEARS OWNED	ANN HOURS USED	FIXED COST PER ACRE				VARIABLE COST PER ACRE				HRS PER ACRE
						DEPR.	INTER.	TAX & INS	TOTAL	FUEL	LUBE	REPAIRS	TOTAL	
PICKUP 1/2 TON	14	0.5	1000.	7.	435.	36.69	30.30	7.76	74.75	72.00	10.80	12.22	95.02	15.000
3-WHEEL HONDA	15	1.0	1200.	7.	100.	1.28	1.39	0.32	2.99	1.80	0.27	0.04	2.11	1.200
WELL PUMP 10HP*	21	0.1	2300.	20.	1540.	2.74	4.24	1.30	8.28	16.58	0.25	3.65	20.48	38.615
WEED SPRAYER	37	22.0	8000.	15.	320.	1.63	2.04	0.60	4.27	0.93	0.14	3.90	4.96	1.071
MISTER IRIG SYS*	56	0.1	10000.	20.	1540.	11.91	18.43	5.64	35.98	0.00	0.51	25.40	25.91	38.615
FARM SHOP	1		4500.	35.		11.57	26.41	4.50	42.48	4.50		0.19	4.69	
TOOLS-SHOP EQUIP	4		3071.	15.		14.33	21.30	3.07	38.70	0.00		0.41	0.41	

MACHINERY & EQUIPMENT 3907.  
INVESTMENT & COSTS PER ACRE 80.15 104.11 23.20 207.45 95.81 11.97 45.82 153.59  
TOTAL INVESTMENT 39071.

10 ACRES AVOCADOS ON 40 ACRE FARM - OTHER ACERAGE USUALLY CITRUS  
FOGGER/MISTER IRRIGATION SYSTEM - WELL WATER  
LANDOWNER BASIS  
DATE PRINTED: 02/19/82

UPDATED 02/19/82

**COST & RETURNS SUMMARY FOR AVOCADOS**  
**3RD YEAR ESTABLISHMENT COSTS FOR ZUTANO AVOCADOS**  
**TULARE AND FRESNO COUNTIES - ROLLING HILLS 1981**  
**BY J. LARUE AND F. YOSHIKAWA, FARA ADVISORS - P. THOMAS, SRA**

	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST PER ACRE	YOUR COST
<b>1. NET RECEIPTS FROM PRODUCTION:</b>					
AVOCADOS	LBS.	0.200	900.000	180.00	
<b>TOTAL RECEIPTS:</b>				<b>180.00</b>	
<b>2. VARIABLE COSTS:</b>					
<b>PREHARVEST:</b>					
PRUNE AND SUCKER	HOURL	5.000	5.000	25.00	
NITROGEN	LBS.	0.350	50.000	17.50	
PRE-EMERGE HERB.	ACRE	15.000	1.000	15.00	
WEED CONTROL-MAT	ACRE	7.500	1.000	7.50	
ZINC SULFATE	LBS.	0.285	7.000	2.00	
ZINC-HELICOPTER	ACRE	25.000	1.000	25.00	
RISC. LABOR	HOURL	5.000	5.004	25.02	
EQUIPMENT (FUEL-LUBE-REPAIRS)	ACRE			102.09	
BUILDINGS (FUEL-LUBE-REPAIRS)	ACRE			5.10	
IRRIGATION (POWER-LUBE-REP)	ACIN	7.954	13.380	106.42	
MACHINERY LABOR	HOURL	5.650	20.726	117.10	
MACHINE CREW LABOR	HOURL	5.650	1.286	7.26	
IRRIGATION LABOR	HOURL	5.650	6.300	35.60	
INTEREST ON OPERATING CAP.	DOL.	0.14000	220.361	30.84	
<b>TOTAL PREHARVEST COSTS:</b>				<b>520.63</b>	
<b>HARVEST:</b>					
PICKING	LBS.	0.060	900.000	54.00	
INTEREST ON OPERATING CAP.	DOL.	0.14000	2.250	0.31	
<b>TOTAL HARVEST COSTS:</b>				<b>54.32</b>	
<b>TOTAL VARIABLE COSTS:</b>				<b>574.94</b>	
<b>3. INCOME ABOVE VARIABLE COSTS:</b>				<b>-394.94</b>	
<b>4. OVERHEAD:</b>					
PERSONAL PROPERTY TAXES:				8.69	
REAL PROPERTY TAXES:				70.00	
MISC. OFFICE & BOOKKEEPING ( 2.50% OF TOTAL VARIABLE COSTS)				14.32	
<b>TOTAL OVERHEAD:</b>				<b>93.06</b>	
<b>TOTAL CASH COSTS:</b>				<b>668.00</b>	
<b>5. INCOME ABOVE ALL CASH COSTS:</b>				<b>-488.00</b>	
<b>6. OWNERSHIP COSTS:</b>					
<b>DEPRECIATION:</b>					
MACHINERY & EQUIPMENT	ACRE			39.60	
IRRIGATION SYSTEM	ACRE			39.05	
BUILDINGS	ACRE			25.90	
<b>TOTAL DEPRECIATION:</b>				<b>104.55</b>	
<b>CAPITAL &amp; INTEREST:</b>					
MACHINERY&EQUIPMENT		0.14000	240.925	33.73	
IRRIGATION SYSTEM		0.14000	431.577	60.42	
BUILDINGS		0.10670	447.131	47.71	
LAND		0.10670	7000.000	756.90	
<b>TOTAL INTEREST CHARGE:</b>				<b>888.76</b>	
<b>TOTAL FIXED COSTS:</b>				<b>993.31</b>	
<b>7. TOTAL OF ABOVE COSTS:</b>				<b>1661.31</b>	
<b>8. NET RETURNS:</b>				<b>-1481.31</b>	
10 ACRES AVOCADOS ON 40 ACRE FARM - OTHER ACREAGE USUALLY CITRUS FOGGER/MISTER IRRIGATION SYSTEM - WELL WATER LANDOWNER BASIS					
DATE PRINTED: 02/18/82	HARVEST MONTH: 11			UPDATED 02/18/82	BUDGET RECORD NUMBER 57

CASH FLOW & INVESTMENT SUMMARY FOR AVOCADOS

BUDGET RECORD NUMBER 57

3RD YEAR ESTABLISHMENT COSTS FOR ZUTANO AVOCADOS  
 TULARE AND FRESNO COUNTIES - ROLLING HILLS 1981  
 BY J. LARUE AND F. YOSHIKAWA, FARM ADVISORS - P. THOMAS, SRA

MONTHLY SUMMARY OF RECEIPTS AND EXPENSES

CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
TOTAL RECEIPTS	\$/AC										90.00	90.00		180.00
OPERATING EXPENSES														
PRUNE AND SUCKER	\$/AC				25.00									25.00
NITROGEN	\$/AC					3.50	3.50	3.50	3.50	3.50				17.50
PRE-EMERGE HERB.	\$/AC												15.00	15.00
WEED CONTROL-RAT	\$/AC			7.50										7.50
ZINC SULFATE	\$/AC					2.00								2.00
ZINC-HELICOPTER	\$/AC					25.00								25.00
PICKING	\$/AC										27.00	27.00		54.00
RISC. LABOR	\$/AC	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	25.02
MACHINE LABOR COST	\$/AC	9.15	9.15	16.42	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	16.42	124.36
INTEREST ON OPER. CAP.	\$/AC	2.28	2.05	3.38	4.10	4.47	2.83	2.25	1.68	1.02	0.66		5.63	30.35
EQUIPMENT COST	\$/AC	8.09	8.09	10.58	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.09	10.58	102.09
BLDG OPER. COST	\$/AC	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	5.10
IRRIGATION COST	\$/AC				5.09	11.77	20.28	20.36	20.28	16.86	8.43	3.34		106.42
IRRIG LABOR COST	\$/AC				1.69	3.95	6.78	6.78	6.78	5.65	2.83	1.13		35.60
TOTAL EXPENSES	\$/AC	22.04	21.80	40.39	55.64	70.45	53.15	52.65	52.00	46.78	58.67	51.23	50.13	574.94

MONTHLY IRRIGATION AND LABOR REQUIREMENTS

MACHINE LABOR	HR/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MACHINE LABOR	HR/AC	1.62	1.62	2.26	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	2.26	20.73
MACH. CREW LABOR	HR/AC			0.64									0.64	1.29
IRRIGATION LABOR	HR/AC				0.30	0.70	1.20	1.20	1.20	1.00	0.50	0.20		6.30
IRRIG. WATER APPLIED	ACIN				0.64	1.48	2.55	2.56	2.55	2.12	1.06	0.42		13.38

MACHINERY FIXED AND VARIABLE COSTS PER ACRE

MACHINE	CODE	SIZE	PURCHASE PRICE	YEARS OWNED	ANN HOURS USED	FIXED COST PER ACRE			VARIABLE COST PER ACRE				HRS PER ACRE	
						DEPR.	INTER.	TAX & INS	TOTAL	FUEL	LUBE	REPAIRS		TOTAL
PICKUP 1/2 TON	14	0.5	10000.	7.	435.	36.69	30.30	7.76	74.75	72.00	10.80	12.22	95.02	15.000
3-WHEEL HONDA	15	1.0	1200.	7.	100.	1.28	1.39	0.32	2.99	1.80	0.27	0.04	2.11	1.200
WELL PUMP 10HP*	21	0.1	2300.	20.	1540.	7.30	11.30	3.46	22.06	27.22	0.41	9.73	37.36	102.925
WEED SPRAYER	37	22.0	8000.	15.	320.	1.63	2.04	0.60	4.27	0.93	0.14	3.90	4.96	1.071
MISTER IRIG SYS*	56	0.1	10000.	20.	1540.	31.75	49.12	15.04	95.91	0.00	1.35	67.71	69.06	102.923
FARM SHOP	1		4500.	35.		11.57	26.41	4.50	42.48	4.50		0.19	4.69	
TOOLS-SHOP EQUIP	4		3071.	15.		14.33	21.30	3.07	38.70	0.00		0.41	0.41	

MACHINERY & EQUIPMENT	3907.					104.55	141.86	34.75	281.16	106.44	12.97	94.20	213.62
INVESTMENT & COSTS PER ACRE													
TOTAL INVESTMENT	39071.												

10 ACRES AVOCADOS ON 40 ACRE FARM - OTHER ACREAGE USUALLY CITRUS  
 FOGGER/MISTER IRRIGATION SYSTEM - WELL WATER  
 LANDOWNER BASIS  
 DATE PRINTED: 02/18/82

UPDATED 02/18/82

**COST & RETURNS SUMMARY FOR AVOCADOS**  
**4TH YEAR ESTABLISHMENT COSTS FOR ZUTANO AVOCADOS**  
**TULARE AND FRESNO COUNTIES - ROLLING HILLS 1981**  
**BY J. LARUE AND F. YOSHIKAWA, FARM ADVISORS - P. THOMAS, SRA**

	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST PER ACRE	YOUR COST
<b>1. NET RECEIPTS FROM PRODUCTION:</b>					
AVOCADOS	LBS.	0.200	4500.000	900.00	
<b>TOTAL RECEIPTS:</b>				900.00	
<b>2. VARIABLE COSTS:</b>					
<b>PREHARVEST:</b>					
PRUNE AND SUCKER	HOURL	5.000	5.000	25.00	
NITROGEN	LBS.	0.350	75.000	26.25	
PRE-EMERGE HERB.	ACRE	15.000	1.000	15.00	
WEED CONTROL-MAT	ACRE	7.500	1.000	7.50	
ZINC SULFATE	LBS.	0.285	7.000	2.00	
ZINC-HELICOPTER	ACRE	25.000	1.000	25.00	
MISC. LABOR	HOURL	5.000	5.004	25.02	
EQUIPMENT (FUEL-LUBE-REPAIRS)	ACRE			102.09	
BUILDINGS (FUEL-LUBE-REPAIRS)	ACRE			5.10	
IRRIGATION (POWER-LUBE-REP)	ACIN	7.800	16.700	130.26	
MACHINERY LABOR	HOURL	5.650	20.726	117.10	
MACHINE CREW LABOR	HOURL	5.650	1.286	7.26	
IRRIGATION LABOR	HOURL	5.650	6.300	35.60	
INTEREST ON OPERATING CAP.	DOL.	0.14000	230.562	31.41	
<b>TOTAL PREHARVEST COSTS:</b>				554.59	
<b>HARVEST:</b>					
PICKING	LBS.	0.060	4500.000	270.00	
INTEREST ON OPERATING CAP.	DOL.	0.14000	11.250	1.58	
<b>TOTAL HARVEST COSTS:</b>				271.58	
<b>TOTAL VARIABLE COSTS:</b>				826.16	
<b>3. INCOME ABOVE VARIABLE COSTS:</b>					
					73.84
<b>4. OVERHEAD:</b>					
PERSONAL PROPERTY TAXES:				8.69	
REAL PROPERTY TAXES:				70.00	
MISC. OFFICE & BOOKKEEPING ( 2.50% OF TOTAL VARIABLE COSTS)				20.65	
<b>TOTAL OVERHEAD:</b>				99.34	
<b>TOTAL CASH COSTS:</b>				925.50	
<b>5. INCOME ABOVE ALL CASH COSTS:</b>					
					-25.50
<b>6. OWNERSHIP COSTS:</b>					
<b>DEPRECIATION:</b>					
MACHINERY & EQUIPMENT	ACRE			39.60	
IRRIGATION SYSTEM	ACRE			48.74	
BUILDINGS	ACRE			25.90	
<b>TOTAL DEPRECIATION:</b>				114.24	
<b>CAPITAL &amp; INTEREST:</b>					
MACHINERY&EQUIPMENT		0.14000	240.925	33.73	
IRRIGATION SYSTEM		0.14000	538.665	75.41	
BUILDINGS		0.10670	447.131	47.71	
LAND		0.10670	7000.000	746.90	
<b>TOTAL INTEREST CHARGE:</b>				903.75	
<b>TOTAL FIXED COSTS:</b>				1017.99	
<b>7. TOTAL OF ABOVE COSTS:</b>					
					1943.49
<b>8. NET RETURNS:</b>					
					-1043.49
<b>10 ACRES AVOCADOS ON 40 ACRE FARM - OTHER ACREAGE USUALLY CITRUS</b>					
<b>FOGGER/MISTER IRRIGATION SYSTEM - WELL WATER</b>					
<b>LANDOWNER BASIS</b>					
DATE PRINTED: 02/18/82	HARVEST MONTH: 11		UPDATED 02/18/82		BUDGET RECORD NUMBER 58



CASH FLOW & INVESTMENT SUMMARY FOR AVOCADOS

BUDGET RECORD NUMBER 58

4TH YEAR ESTABLISHMENT COSTS FOR ZUTANO AVOCADOS  
 TULARE AND FRESNO COUNTIES - ROLLING HILLS 1981  
 BY J. LARUE AND F. YOSHIKAWA, FARM ADVISORS - P. THOMAS, SRA  
 MONTHLY SUMMARY OF RECEIPTS AND EXPENSES

CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
TOTAL RECEIPTS	\$/AC										450.00	450.00		900.00
OPERATING EXPENSES														
PRUNE AND SUCKER	\$/AC				25.00									25.00
NITROGEN	\$/AC					5.25	5.25	5.25	5.25	5.25				26.25
PRE-EMERGE HERB.	\$/AC												15.00	15.00
WEED CONTROL-MAT	\$/AC			7.50										7.50
ZINC SULFATE	\$/AC					2.00								2.00
ZINC-HELICOPTER	\$/AC					25.00								25.00
PICKING	\$/AC										135.00	135.00		270.00
MISC. LABOR	\$/AC	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	25.02
MACHINE LABOR COST	\$/AC	9.15	9.15	16.42	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	16.42	124.36
INTEREST ON OPER. CAP.	\$/AC	2.28	2.05	3.38	4.18	4.78	3.18	2.53	1.89	1.14	1.94		5.63	32.98
EQUIPMENT COST	\$/AC	8.09	8.09	10.58	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.09	10.58	102.09
BLDG OPER. COST	\$/AC	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	5.10
IRRIGATION COST	\$/AC				6.16	14.51	24.80	24.80	24.80	20.67	10.37	4.13		130.26
IRRIG LABOR COST	\$/AC				1.69	3.95	6.78	6.78	6.78	5.65	2.83	1.13		35.60
TOTAL EXPENSES	\$/AC	22.04	21.80	40.39	56.80	75.24	59.77	59.12	58.48	52.46	169.90	160.03	50.13	826.16

MONTHLY IRRIGATION AND LABOR REQUIREMENTS														
MACHINE LABOR	HR/AC	1.62	1.62	2.26	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	2.26	20.73
MACH. CREW LABOR	HR/AC			0.64									0.64	1.29
IRRIGATION LABOR	HR/AC				0.30	0.70	1.20	1.20	1.20	1.00	0.50	0.20		6.30
IRRIG. WATER APPLIED	ACTIN				0.79	1.86	3.18	3.18	3.18	2.65	1.33	0.53		16.70

MACHINERY FIXED AND VARIABLE COSTS PER ACRE														
MACHINE	CODE	SIZE	PURCHASE PRICE	YEARS OWNED	ANN HOURS USED	FIXED COST PER ACRE				VARIABLE COST PER ACRE				HRS PER ACRE
						DEPR.	INTER.	TAX \$INS	TOTAL	FUEL	LUBE	REPAIRS	TOTAL	
PICKUP 1/2 TON	14	0.5	10000.	7.	435.	36.69	30.30	7.76	74.75	72.00	10.80	12.22	95.02	15.000
3-WHEEL HONDA	15	1.0	1200.	7.	100.	1.28	1.39	0.32	2.99	1.80	0.27	0.04	2.11	1.200
WELL PUMP 10HP*	21	0.1	2300.	20.	1540.	9.11	14.10	4.32	27.53	31.44	0.47	12.15	44.06	128.462
WEED SPRAYER	37	22.0	8000.	15.	320.	1.63	2.04	0.60	4.27	0.93	0.14	3.90	4.96	1.071
MISTER IRIG SYS*	56	0.1	10000.	20.	1540.	39.62	61.31	18.77	119.70	0.00	1.69	84.51	86.20	128.462
FARM SHOP	1		4500.	35.		11.57	26.41	4.50	42.48	4.50		0.19	4.69	
TOOLS-SHOP EQUIP	4		3071.	15.		14.33	21.30	3.07	38.70	0.00		0.41	0.41	

MACHINERY & EQUIPMENT	3907.	114.24	156.85	39.34	310.43	110.66	13.37	113.42	237.45
INVESTMENT & COSTS PER ACRE									
TOTAL INVESTMENT	39071.								

10 ACRES AVOCADOS ON 40 ACRE FARM - OTHER ACREAGE USUALLY CITRUS  
 FOGGER/MISTER IRRIGATION SYSTEM - WELL WATER  
 LANDOWNER BASIS  
 DATE PRINTED: 02/18/82

UPDATED 02/18/82

1st-4th year Establishment Costs for Zutano Avocados  
Tulare and Fresno Counties - Rolling Hills 1981  
By J. LaRue and F. Yoshikawa, Farm Advisors - P. Thomas, SRA

10 acres avocados on 40 acre farm - other acreage usually citrus  
Fogger/Mister Irrigation System - well water

Landowner basis

90 trees/acre

Cost Estimate Assumptions:

1. Assuming a newly developed orchard planted on a rolling hillside location. Land is developed with minimum land preparation or leveling and is not terraced. Costs of road development and other means of access are not included in this study.
2. Frost Protection:  
Hillside ground is warmer in the winter months than the valley floor. No fruit is on the trees in winter months. Therefore frost protection is not cost effective since would only be protecting trees and no fruit.  
~~See below - wraps are used in 1st year.~~
4. Land preparation in March:  
Rough leveling only.  
Large bulldozer rented to move rocks and knock down brush.  
Contract - bulldozer and driver (1 hr/acre) @ \$60.00/hr.  
Labor to burn brush - 8 hrs/acre @ \$5.00/hr = \$40.00/acre.
5. Plant late April:  
Tree spacing 22'x22' - 90 trees/acre  
Trees, container grown, grafted to seedlings  
year 1 - 90 trees/acre @ \$8.00/tree = \$720.00/acre  
year 2 - 2 trees/acre @ \$8.00/tree = \$16.00/acre  
clonal root stock - avocado root rot resistant add approx. \$3.00/tree  
Contract plant in year 1 - 90 trees/acre @ \$1.75/tree = \$157.50/acre  
includes layout, digging holes by hand, planting, staking and wrapping,  
cost of 1"x1"x4' stake and cost of wrap.  
Replant labor 1/2 hr/tree x 2 trees/acre @ \$5.00/hr = \$5.00/acre
3. Fill wraps in November (year 1):  
Materials (bark or sand) and labor \$24.00/acre  
For frost protection.
6. Fertilizer:  
Nitrogen injected in the irrigation system.  
Costs divided equally among months May through September.  
year 1 - 15 lbs N/acre 3 lbs each month 0.34/lb.  
year 2 - 30 lbs N/acre 6 lbs each month  
year 3 - 50 lbs N/acre 10 lbs each month  
year 4 - 75 lbs N/acre 15 lbs each month  
Cost of nitrogen \$.35/lb.

## 7. Weed control:

Materials *per year*:

- year 1 - April through Sept (weed oil, water, dinitro) \$24/acre  
 total split equally among 5 months, 1 appl. each month  
 year 1-4 - December pre-emerge herbicide, \$15/acre  
 year 2-4 - spot spray (weed oil, water, dinitro) \$7.50/acre

Weed sprayer, self propelled used for each application.

Boom used in December

- 2 men spot spray in March (years 2-4) and April-Sept (year 1)  
 (second man considered crew labor)

## 8. Irrigation:

All of the water is pumped from a well with 10 hp pump. Assuming 100 ft lift is needed to bring water to the surface, 100 ft lift to get the water up the hill to the trees and 35 ft lift (15 PSI) additional pressure needed for the mister/fogger system for a total of 235 ft lift.

The irrigation system and pump is assumed to be only used for the avocado and not used for the other crops grown.

4 gallon emitters used:

year	#emitters	gal/hr/tree	#hrs	total gal/tree	trees/acre	total gal/acre/irrigation
1	1	4	3	12	90	1080
2	1	4	6	24	90	2160
3	2	8	8	64	90	5760
4	2	8	10	80	90	7200

Maximum pump requirements:

$$8 \text{ gal/tree} \times 90 \text{ trees/acre} \times 5 \text{ acres} \div 60 \text{ min/hr} = 60 \text{ gal/min} (.13 \text{ ac.in/hr})$$

Assuming 1/2 of the field or 5 acres is irrigated at a time.

The fogger/mister irrigation system includes lines, emitters, fertilizer injector system, risers, hoses, etc. \$1000/acre x 10 acres = \$10,000

Irrigation schedule:

Month	days apart	#irrig	Year 1		Year 2		Year 3		Year 4	
			gal/A	ac.in/A	gal/A	ac.in/A	gal/A	ac.in/A	gal/A	ac.in/A
April	10	3x	3,240	.12	6,480	.24	17,280	.64	21,600	.79
May	4	7x	7,560	.28	15,120	.56	40,320	1.48	50,400	1.86
June	2-3	12x	12,960	.48	25,920	.95	69,120	2.55	86,400	3.18
July	2-3	12x	12,960	.48	25,920	.96	69,120	2.56	86,400	3.18
Aug	2-3	12x	12,960	.48	25,920	.95	69,120	2.55	86,400	3.18
Sept	3	10x	10,800	.40	21,600	.80	57,600	2.12	72,000	2.65
Oct	6	5x	5,400	.20	10,800	.40	28,800	1.06	36,000	1.33
Nov	15	2x	2,160	.08	4,320	.16	11,520	.42	14,400	.53
TOTAL		63x	68,040	2.52	136,080	5.02	362,880	13.38	453,600	16.70

Note: 1 acre inch = 27,154 gallons

Irrigation labor = .1 hr/appl/acre

## 9. Pest control:

No pest control included in this study.

If any insecticides were applied a helicopter would be used at a charge of \$8.00/acre (\$250 min. charge).

Cost of insecticide would depend on chemical applied.

- 10. Prune and sucker in April:
  - Year 3 - 5 hrs/acre @ \$5.00/hr = \$25.00/acre
  - Year 4 - 5 hrs/acre @ \$5.00/hr = \$25.00/acre
- 11. Misc labor:
  - 5 hrs/acre @ \$5.00/hr = \$25.00/acre
  - 25 min (.417/hr) charged each month for 12 months
- 12. Zinc application in May (yrs 2-4):
  - Materials - zinc sulfate 7 lbs/acre (7 lbs/- 20 gal water) @ ~~\$2.85~~<sup>32</sup>/lb
  - Application - by helicopter (\$250 min cost) \$25.00/acre
- 13. Pickup: costs based on 25 miles/acre/month
- 14. 3-wheel honda used to check misters, rodent control, inspect trees and general field checks. Costs based on 1 mile/acre/month.
- 15. Labor rates include benefits:
  - Machinery operators and crew \$5.65/hr
  - Irrigators \$5.65/hr
  - Misc. labor \$5.00/hr
- 16. Buildings and equipment:
  - Farm shop 1500 sq.ft. @ \$12/sq.ft. \$18,000
  - Tools and shop equipment \$12,285
  - Proportion allocated to avocados is 25% of above.
- 17. Land owned:
  - Land value \$7,000/acre Land tax \$70.00/acre
- 18. Bookkeeping and misc office: 2.5% of total variable costs
- 19. Machinery costs calculated by computer:
 

For self-propelled machinery and implements, the width, speed, field efficiency and number of passes in the orchard are all used in determining the number of hours necessary to complete an operation. Tractor hours are then calculated by taking into consideration all implements pulled.

Per hour cost of depreciation, interest, taxes, insurance, repairs, fuel, and lube are calculated by the computer using purchase price, annual hours of usage, years of life, etc. and this rate is multiplied by the total hours of usage for each machine and equipment.
- 20. Harvest in Oct and Nov (50% each month):
  - Assuming partial harvest in years 3 and 4.
  - Year 3 - 10 lbs/tree x 90 trees/acre = 900 lbs/acre (10% full production)
  - Year 4 - 50 lbs/tree x 90 trees/acre = 4500 lbs/acre (50% full production)
  - Net price to grower \$.20/lb.
  - Packing, selling, cooling, hauling charges have been deducted and amount to approx \$.15/lb.
  - Picking costs \$.06/lb.

21. See Budget Record #181 for Production Budget.

22. Adjustment to establishment costs in 3rd and 4th years:

	<u>3rd yr</u>	<u>4th yr</u>
Total costs	\$ 1481.31	\$ 1043.49
Less: harvest costs	54.32	271.58
% remaining costs	142.70	385.96
(3rd yr 10% - 4th yr 50%)	<hr/>	<hr/>
Adjusted establishment costs	\$ 1284.29	\$ 385.95