

AN ANALYSIS OF (MED DENSIT 217) TREES PER ACRE PEACH ORCHARD
AND
POTENTIAL PROFIT OF THE SYSTEM

Assumptions : All values in COLOR may be changed, they determine the other values

Cost of Trees (per tree)	\$6.00	Custom Planting Cost/Tree	\$0.25
Straw Cost per Bale	\$1.25	Fertilizer Cost/Ton	\$200.00
Annual Cost of Cover/Tree	\$0.00	Cost of Mouse Guards/Tree	\$0.25
Cost of Tree Training/Tree	\$0.75	Interest Rate	12.00%
Cost of Trellis/Tree	\$0.00	Harvest Cost per Bushel	\$1.89
Cost of Shelter & Post/Tree	\$0.00	Expected Peach Price per Bushel	\$20.00
Cost of Wildlife Control/Tree	\$0.15	Expected Life of Orchard (years)	15

Tree spacing _ft_ 20 10 200 217
width length = sq.ft. trees/acre

Table 1. Site Preparation Cost for One Acre of Peaches (wholesale)

Activity	Labor hours	Equipment hours	Labor cost	Equipment code	Equipment cost	Material cost	Other cost	Total
Bulldoze old trees		3.2			\$192.00			\$192.00
Lime (3 ton)						\$90.00		\$90.00
Real Estate Tax Management (hours)				1.00			\$35.00 \$9.00	\$35.00 \$9.00
Total	0.0	3.2	\$0.00		\$192.00	\$90.00	\$44.00	\$326.00

Table 2. Year One Planting and Growing Cost for One Acre of Peaches

Activity	Labor hours	Equipment hours	Labor cost	Equipment code	Equipment cost	Material cost	Other cost	Total
Ground Preparation								

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60hp tractor	0.25	0.25	\$2.25	2	\$1.95		\$4.20
Plow		0.25	\$0.00	8	\$1.07		\$1.07
60hp tractor	0.40	0.40	\$3.60	2	\$3.12		\$6.72
Disc		0.40	\$0.00	9	\$2.01		\$2.01
Pick stone & roots	0.20	0.20	\$1.20	15	\$1.15		\$2.35
Nematode Control						\$125.00	\$125.00
Sprayer	0.31	0.31	\$2.79	5	\$1.22		\$4.01
40 hp tractor		0.31	\$0.00	3	\$1.55		\$1.55
Layout	0.50	0.50	\$3.00	1	\$4.78		\$7.78
Marking	1.00		\$6.00	1	\$0.00		\$6.00
Purchase trees			\$0.00		\$0.00	\$1,302.00	\$1,302.00
Custom Plant			\$0.00		\$0.00	\$54.25	\$54.25
Water trees	2.00	1.00	\$12.00	13	\$5.86		\$17.86
Straw 1/2 bale/tr	2.00	2.00	\$12.00	15	\$11.53	\$135.63	\$159.15
Mouse Bait	0.50	0.50	\$3.00		\$0.00	\$5.00	\$8.00
Mouse Guards			\$0.00		\$0.00	\$54.25	\$54.25
Weed Control			\$0.00		\$0.00	\$20.23	\$20.23
Weed sprayer	0.62	0.62	\$5.58	5	\$2.43		\$8.01
40 hp tractor		0.62	\$0.00	3	\$3.10		\$3.10
Insect & Disease Cont			\$0.00		\$0.00	\$33.02	\$33.02
Airblast spr.	0.62	0.62	\$5.58	4	\$7.19		\$12.77
40 hp tractor		0.62	\$0.00	3	\$3.10		\$3.10
Cover Crop	0.30	0.30	\$1.80	6	\$0.68	\$11.13	\$13.61
40 hp tractor		0.30	\$0.00	3	\$1.50		\$1.50
Cultipack	0.30	0.30	\$1.80	12	\$2.03		\$3.83
Mowing	0.21	0.21	\$1.23	7	\$0.88		\$2.12
40 hp tractor		0.21	\$0.00	3	\$1.03		\$1.03
Fertilizer	0.31		\$1.86	6	\$0.00	\$13.02	\$14.88
irrigation		0.31	\$0.00	17	\$0.00		\$0.31
Wildlife Control	6.00	6.00	\$36.00	1	\$57.40	\$32.55	\$125.95
Trellis			\$0.00		\$0.00	\$0.00	\$0.00
Shelter/posts			\$0.00		\$0.00	\$0.00	\$0.00
Cover (Plastic)	0.00		\$0.00		\$0.00	\$0.00	\$0.00
Trickle irrigation	5.00	1.00	\$30.00	17	\$0.00		\$30.00
Real Estate Tax						\$35.00	\$35.00
Management (hours)	1.00					\$9.00	\$9.00

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Total 20.52 17.22 \$129.69 \$113.57 \$1,606.83 \$223.25 \$2,073.65

Table 3. Year Two Growing Cost for One Acre of Peaches

Activity	Labor hours	Equipment hours	Labor cost	Equipment code	Equipment cost	Material cost	Other cost	Total
Prune/training	3.62	3.62	\$32.55	1	\$34.60	\$27.90	\$54.25	\$149.30
Tree replacement	1.00	1.00	\$6.00	15	\$5.76	\$71.61		\$83.37
Herbicide spray	0.62	0.62	\$3.72	5	\$2.43	\$20.23		\$26.38
40hp tractor		0.62	\$0.00	3	\$3.10			\$3.10
Insect and Disease	0.62	0.62	\$3.72	4	\$7.19	\$33.02		\$43.93
40hp tractor		0.62	\$0.00	3	\$3.10			\$3.10
Cover Crop	0.30	0.30	\$1.80	6	\$0.68	\$11.13		\$13.61
40 hp tractor		0.30	\$0.00	3	\$1.50			\$1.50
Mouse control	0.30	0.30	\$1.80	1	\$2.87	\$3.00		\$7.67
Wildlife Control	6.00							

	(Bushel)		/Bushel	12.00%				
Site preparation			\$326.00		\$96.00	\$422.00	(\$422.00)	(\$422.00)
1	0.00	0.00	2,073.65	0.00	146.64	2,220.29	(2,220.29)	(2,642.29)
2	0.00	0.00	599.89	0.00	362.44	962.32	(962.32)	(3,604.61)
3	100.00	2000.00	807.51	189.00	211.48	1,018.99	981.01	(2,623.60)
4	200.00	4000.00	799.14	378.00	218.28	1,017.42	2,982.58	358.98
5	250.00	5000.00	851.43	472.50	218.09	1,069.52	3,930.48	4,289.46
6	250.00	5000.00	891.00	472.50	224.34	1,115.34	3,884.66	8,174.11
7	300.00	6000.00	770.94	567.00	229.84	1,000.78	4,999.22	13,173.33
8	350.00	7000.00	770.94	661.50	216.09	987.03	6,012.97	19,186.30
9	350.00	7000.00	770.94	661.50	214.44	985.38	6,014.62	25,200.92
10	300.00	6000.00	770.94	567.00	214.25	985.19	5,014.81	30,215.73
11	250.00	5000.00	770.94	472.50	214.22	985.16	4,014.84	34,230.57
12	250.00	5000.00	770.94	472.50	214.22	985.16	4,014.84	38,245.41
13	200.00	4000.00	770.94	378.00	214.22	985.16	3,014.84	41,260.25
14	100.00	2000.00	770.94	189.00	214.22	985.16	1,014.84	42,275.09
15	100.00	2000.00	770.94	189.00	214.22	985.16	1,014.84	43,289.94
Value of land after 15 years		\$800.00	13,287.08		3,422.99	16,710.06		
			885.81		228.20	1,114.00	\$5.21	

Table 11. Present Value of the Potential Profit from Average mature Yield at a Price of \$20.00 per Bushel, harvest rate of 231 Bushels Per Acre and a discount rate of 12.00% \$1.89 / Bushel

Year	Yield per acre	Gross Income	Annual growing cost	Harvest cost	Net Annual Profit	Discount Factor	Annual present value of profit	Accumulated present value of profit
Value of land			\$800.00		(\$800.00)			\$0.00
Site preparation			\$326.00		(\$326.00)			\$0.00
1	0	\$0.00	\$2,073.65	\$0.00	(\$2,073.65)	0.8929	(\$1,851.47)	(\$1,851.47)
2	0	\$0.00	\$599.89	\$0.00	(\$599.89)	0.7972	(\$478.23)	(\$2,329.70)
3	100	\$2,000.00	\$807.51	\$189.00	\$1,003.49	0.7118	\$714.26	(\$1,615.44)
4	200	\$4,000.00	\$799.14	\$378.00	\$2,822.86	0.6355	\$1,793.98	\$178.54
5	250	\$5,000.00	\$851.43	\$472.50	\$3,676.07	0.5674	\$2,085.90	\$2,264.44

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6	250	\$5,000.00	\$891.00	\$472.50	\$3,636.50	0.5066	\$1,842.36	\$4,106.81
7	300	\$6,000.00	\$770.94	\$567.00	\$4,662.06	0.4523	\$2,108.88	\$6,215.69
8	350	\$7,000.00	\$770.94	\$661.50	\$5,567.56	0.4039	\$2,248.64	\$8,464.33
9	350	\$7,000.00	\$770.94	\$661.50	\$5,567.56	0.3606	\$2,007.72	\$10,472.05
10	300	\$6,000.00	\$770.94	\$567.00	\$4,662.06	0.3220	\$1,501.06	\$11,973.11
11	250	\$5,000.00	\$770.94	\$472.50	\$3,756.56	0.2875	\$1,079.92	\$13,053.03
12	250	\$5,000.00	\$770.94	\$472.50	\$3,756.56	0.2567	\$964.22	\$14,017.24
13	200	\$4,000.00	\$770.94	\$378.00	\$2,851.06	0.2292	\$653.39	\$14,670.63
14	100	\$2,000.00	\$770.94	\$189.00	\$1,040.06	0.2046	\$212.82	\$14,883.45
15	100	\$2,000.00	\$770.94	\$189.00	\$1,040.06	0.1827	\$190.02	\$15,073.46
Value of land after 15 years		\$800.00			\$800.00	0.1827	\$146.16	\$15,219.62

Table 12
 Effect of varying yield on cost/bushel for peaches (fresh market)
 (MED DENSIT 217)Trees/Acre

Average growing cost 15 years		\$939.14		
Average interest cost 15 years		\$228.20		
Average Yield/Acre	Growing Cost per Bushel	Harvest Cost per Bushel	Interest Cost per Bushel	Total Cost per Bushel
100	\$9.39	\$1.89	\$2.28	\$13.56
150	\$6.26	\$1.89	\$1.52	\$9.67
200	\$4.70	\$1.89	\$1.14	\$7.73
250	\$3.76	\$1.89	\$0.91	\$6.56
350	\$2.68	\$1.89	\$0.65	\$5.23
400	\$2.35	\$1.89	\$0.57	\$4.81
450	\$2.09	\$1.89	\$0.51	\$4.48

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Modified for Excel 3.0 by Mark Longstroth (1-Mar-1992)

ACCPRO	=\$I\$258:\$I\$278
ANPROF	=\$H\$258:\$H\$278
ANPV	=\$H\$291:\$H\$313
AVGRCST	=\$D\$318
AVINTCST	=\$D\$319
COSTTREE	=\$C\$11
COVERCST	=\$C\$13
CUSTPLAN	=\$G\$11
Definitions	=\$A\$389:\$A\$390
DEVCST	=\$A\$234:\$C\$234
EQUIPMENT	=\$N\$6:\$N\$38
EQUIP_MISC	=\$X\$4
FERT01	=\$Q\$46
FERT02	=\$Q\$47
FERT03	=\$Q\$48
FERT04	=\$Q\$49
FERT05	=\$Q\$50
FERT06	=\$Q\$51
FERT07	=\$Q\$52
FERTCST	=\$G\$12
FUEL	=\$V\$3
HARCST	=\$G\$15
HERB01_AREA	=\$U\$62
HERB01_LABOR	=\$P\$67
HERB01_MAT	=\$S\$67
HERB02_AREA	=\$U\$89
HERB02_LABOR	=\$P\$94
HERB02_MAT	=\$S\$94
herb03_area	=\$U\$118