

FRUIT - AVOCADO
CP 437 - 100 Rev. 8/86 pbh
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1986 ESTIMATION OF LOSS FOR A SINGLE AVOCADO TREE

This study is meant to serve as a guideline for insurance companies and growers who need to estimate the value of a single avocado tree lost in a fire or other accident. For this study we have assumed that trees from a healthy ten year-old mature grove (100 trees/acre) have been totally lost. The costs of clearing the land and replanting a tree, coupled with the expected annual yield losses until the tree comes into full production again, are totaled to achieve the value of the tree.

Additional assumptions and conditions are as follows:

1. The value of the crop is estimated at 35¢/lb. This is an average net return to the grower in 1985 for Hass avocados in California (figures supplied by the California Avocado Commission).
2. The average yield per acre for a ten year-old grove is estimated at 10,000 lbs. This figure is achieved as follows:

$$120 \text{ lbs./tree} \times 100 \text{ trees} = 12,000 \text{ lbs.}, \text{ minus } 15\% \text{ for missing trees (drive rows)} = \text{approximately } 10,000 \text{ lbs./acre. This figure is, of course, subject to variability.}$$
3. The loss of aesthetic value of the tree is not considered.
4. The costs of irrigation water, fertilizer and normal pest control practices are not considered since these are not "special" costs involved in bringing a tree back into production.
5. The cost of replacing the irrigation system will vary greatly depending on how much damage has been done and the type of system. The value of \$6.00 should cover the materials and labor for replacing a coupling, 12" riser and microjet head.
6. The crop was harvested and sold before the tree was lost in year 0.
7. The replacement tree cost is \$17.00. This is the current cost of a Hass scion on a clonal G755 rootstock, the currently recommended rootstock because of its resistance to avocado root rot.
8. Value of crop lost each year is multiplied by a discount rate (5%/year) to reflect present day value of the crop.

	0	1	2	3	4	5	6	7	8	9	10		
Yield per tree (lbs) (replacement tree)	-	0	0	5	10	20	40	60	80	100	120	TOTAL COST	
Root removal/clean-up/ land preparation	8.00	-										8.00	
Replacement tree (clonal)	17.00											17.00	
Layout, planting, wrapping (labor)	4.25	.30										4.55	
Planting materials (mulch, stakes)	2.25	.20										2.45	
Special pest control (deer, gophers, squirrels)	1.00	1.00	.50									2.50	
Special weed control	2.50	2.50	2.00									7.00	
Miscellaneous (erosion control) etc.	1.50	1.25	1.00									3.75	
Yield loss (lbs)	-	(120)	(120)	(115)	(110)	(100)	(80)	(60)	(40)	(20)	0		
Value of crop lost (yield loss x 0.35/lb)		42.00	42.00	40.25	38.50	35.00	28.00	21.00	14.00	7.00	0		
Discount factor %		.95	.91	.86	.82	.78	.75	.71	.68	.64			
Value x discount		39.90	38.22	34.61	31.57	27.30	21.00	14.91	9.52	4.48	0	221.51	
Annual loss/tree	36.50	45.15	41.72	34.61	31.57	27.30	21.00	14.91	9.52	4.48	0	266.76	
												Replacement of irrigation system	6.00
												TOTAL	\$272.76