

Calculate Cost of Fire Damage to Avocado & Citrus Trees

Farmers can calculate cost of damage to trees

As it is a frequent occurrence in Ventura County, it is helpful for growers to know the value, for insurance purposes, of trees that are lost due to fire. Determining the value of a tree in an orchard is not a simple matter because one must take into account the income lost if the tree had been producing, as well as the costs of planting and maintaining the new tree. Also, the income from the new tree, once it comes into bearing, helps to defray the costs involved in bringing the tree to maturity. Several different methods can be used to establish such a value. I will briefly work through the necessary calculations for one of these methods.

For our example we will use a grove of 8-year-old Bacon avocado trees, which produced an average of 120 pounds per tree this year. We will assume that the trees reach their peak yield at 8 years of age, and that the average selling price is 30cents a pound (7-year average).

Assuming that the replacement tree will take 8 years to reach the present production of 120 pounds, an estimated production over these 8 years would be 0, 0, 10, 20, 40, 60, 80, and 120 pounds, or a total of 330 pounds in 8 years. If the tree had remained in place, we would have expected a yield of 8×120 , or 960 pounds of fruit over the 8-year period. The difference between these two figures, 630 pounds, represents the loss of production until the new tree reaches the same production as the old tree. If we assume an average price of 30cents a pound over the 8 years, the total loss of value of fruit would be \$189 per tree.

We need to add to this figure a reasonable cost for removal of the old tree (\$15), planting the new tree (\$3), the cost of the new tree (\$14), and a figure to represent the special care required to nurse along a new tree (\$15). The total estimated value of a tree then comes to \$189 plus \$47, or \$236.

Keep in mind that avocado and citrus trees damaged by fire will often come back in 2-3 months with new growth, and eventually totally recover. One way to account for this is to estimate the percentage of each damaged tree which was destroyed, and then divide the damaged trees into categories. For example, if 10 trees were 50% damaged, the total loss would be 10 times \$236.00 divided by two, or \$1,180. An additional figure could be added for special care, such as pruning dead branches, brush removal and whitewashing for each of the partly damaged trees.

The figures would be similar for other varieties of avocados, although the production and price figures should be adjusted accordingly. The picture may be somewhat more complicated for citrus because of additional cultural costs, such as pruning and spraying, which will be different for the old and new tree. In both cases, a more precise analysis can be conducted taking into account the present value of money. If you need help with such a calculation, call the citrus Farm Advisor at the U.C. Cooperative Extension office.