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## PLANT MATERIAL EVALUATION

by Gordon S. King

### General observations

There are at least seven basic ways to place a dollar value on plant material. No one way is ideal for all cases. Some of the methods used in the past are being changed or have been changed within the last year. Very often the many conditions under which the damage occurred will determine the method to be used and in some cases, several methods may be used.

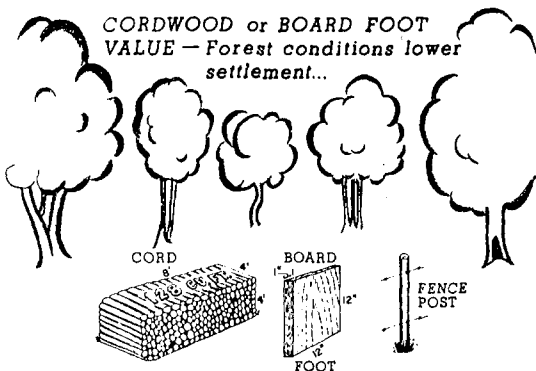
### Why evaluate

1. Settlement for damage to plant material—in court or out of court.
2. Income tax deduction.
3. Appraisal of the value of plant material for real estate purposes, etc.

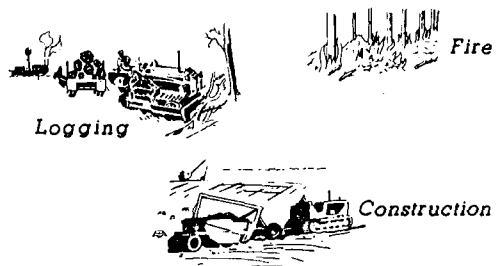
### Methods of evaluating

#### 1. Board Foot or Cordwood Value.

This method is used under forest conditions or to force a lower settlement when a higher value is reached by some other method. If trees are cut for lumber, cordwood, or for other forest products on land that is trespassed, then the value of the forest product and the amount is used.



### FOREST TREES INJURED OR KILLED



### TRIPLE DAMAGES - NEGLIGENCE

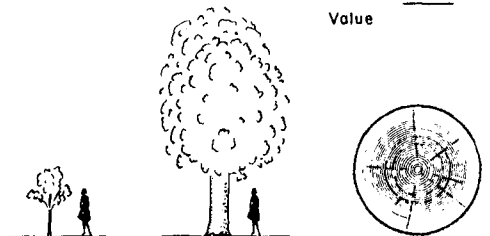
It is often best to have an extension or consulting forester help in deriving the amount.

#### 2. Capital Gain.

This method is seldom used today but is mentioned in some texts. If the cost of planting a 2½ inch tree were deposited in a bank,

### INVESTMENT VALUE - SELDOM USED...

- a. ORIGINAL PLANTING COST  
 COMPOUND INTEREST X AGE = ?  
 40.00 X 5% X 100 =
- b. MAINTENANCE ... COST X INTEREST X AGE = ?  
 3.00 X 5% X 100 = \_\_\_\_\_  
 Value



and the interest computed for a number of years the tree is old; and if an estimated yearly maintenance cost were also deposited, and the accrued interest estimated; a figure could be reached.

Rather than figure this out yourself, call a bank and ask the final value of say, \$50.00 left in their bank for 100 years, plus say, \$3.00 deposited yearly for 100 years.

**3. Replacement**

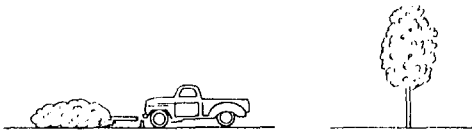
This method is most commonly used and best understood by the public because it is a method used for settlements in other matters.

It may be divided into several areas:

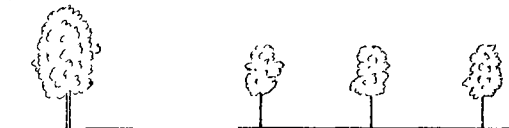
- a. Replace the same number and size of plants. This is usually used on small trees, shrubs, or turf. For trees over 18 inches in diameter, this may be impractical.
- b. Replace a large tree with several small trees which may equal the total diameter of the large tree.
- c. Replace a large tree with a smaller tree plus a cash settlement.

**REPLACEMENT - MOST OFTEN USED**

A. Same size



B. Smaller size



**4. Income Tax Deduction—Federal**

This is sometimes called real estate value and is presently under considerable criticism

and review because it is determined primarily by real estate appraisers. Supply and demand of real estate in the area at that particular time may affect the value.



The Internal Revenue Service holds that the allowable deduction is the difference in the market value of the property as a whole immediately before and after the tree loss has occurred, as determined by a competent real estate appraiser.

There are cases where other methods of determining the value of plants have been used, and permitted by the IRS, especially where the demand far exceeded the supply of real estate.

**INCOME TAX DEDUCTION**

Interpretation Varies

a. Real Estate Appraisers

Before		\$ 25,000
After		\$ 24,000
	<i>b. Cost of cleaning up</i>	\$ 1,000
		X
		\$ 1,000+X

**5. Square Inch Method, Felt-Spicer Method**

This is based on the number of square inches in cross-section at dbh, computed at \$10.00 per square inch; species, physical condition, and aesthetic value being considered.

This method is used quite commonly on specimen trees in the urban and suburban areas, and is recommended for trees over 12 inches in diameter.

To obtain a clear and complete understanding of this method, a booklet, A Guide to Professional Evaluation of Landscape Trees, Specimen Shrubs, and Evergreens, is available from the International Society of Arboriculture, P.O. Box 71, 5 Lincoln Square, Urbana, Illinois 61801.

Cost to members of the ISA is \$5.00. To nonmembers the cost is \$25.00.

**SQUARE INCH METHOD**

\$ 9.00/Square Inch

D.B.H.	SQUARE INCHES	BASIC VALUE	SPECIES VALUE	PHYSICAL CONDITION	AESTHETICS	FINAL VALUE
20"	314	\$2826	100 %	100 %	100 %	\$2826
20"	314	\$2826	60 %	50 %	25 %	\$212
			\$1696	\$848	\$212	

**WHEN...**

1. Value on public trees for budget purposes.
2. Insurance
3. Negligence

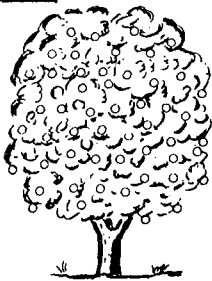
**6. Crop Value Lost**

This method is used where the plants have a crop value, such as fruit trees, berry bushes, Christmas trees, etc. Multiply the crop value per year by the years of remaining life expectancy of the plants. The life expectancy figure may be cut if the replacement cost of the destroyed plants is considered.

It is desirable, if not a must, to consult an extension pomology specialist in the particular area.

**CROP VALUE**

Fruit

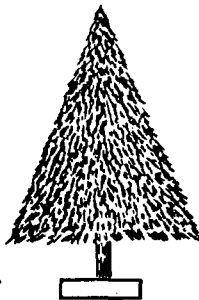


10 bushels

@4.00=\$40 x life expectancy

**Xmas Trees**

\$ 4.00



**7. The British Arboricultural Association Method**

A point system is used to evaluate these factors:

Factor	Points Evaluated			
	1	2	3	4
1. Size of tree	small	medium	large	huge
2. Useful life expectancy	10-20	20-40	40-100	100 plus

3. Importance of position in landscape	little	some	considerable	great
4. Presence of other trees	many	some	few	none
5. Relation to the setting	mod. suitable	fairly suitable	very suitable	especially suitable
6. Form	poor	fair	good	excep. good
7. Special factors	none	one	two	three

Points for each evaluation are multiplied and the final figure is in British pounds. The conversion then may be made to other currencies.

**Conclusions**

There are various ways to place a value on plant material and probably the list here is not complete. Good judgment through experience is important in selecting the method to use, for no one method can be used under every condition. Always charge for your services in evaluating the plant material on a fee basis and not on a percent of the evaluation. A percentage fee may influence the method used and judgment beyond justification.

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