10 lb. per cubic foot for the top portion, and for eucalypts of 10 lb. per cubic foot for the whole post. All posts are 6 ft. in length.

Table 3.—Volume of Treatable Wood and Amount of Creosote absorbed per Post.

—	Minimum Penetration.	Average Absorption in Pounds per Cubic Foot.	Diameter of Post.			
			4 in.	5 in.	6 in.	7 in.
	Inches.					
Volume of treatable wood ..	1	..	..	..	..	..
Cubic feet	..	..	0·4	0·5	0·65	0·8
Absorption by pines ..	1	15	..	..	..	..
Gallons	..	..	0·6	0·8	1·0	1·2
Absorption by eucalypts ..	1	10	..	..	..	..
Gallons	..	..	0·4	0·5	0·65	0·8

Example 1: Given that *Eucalyptus ovata* posts can be cut and delivered from the farm plantation for 6d. per 5 in. post, and that creosote is delivered for 1s. 8d. per gallon, estimate the total cost of a treated post using the above-quoted minimum penetrations and absorptions—

	s. d.	s. d.
Cost of post delivered at plant	..	0 6
Cost of treating—		
Labour	0 3	
Creosote (volume equals ½ gallon, costing 10d.) ..	0 10	
		1 1
Total		1 7

RELATIVE COSTS AND SERVICE CHARGES.

The fundamental problem of farm economics is that of investment, and in choosing between treated and untreated posts an analysis of the relative investment costs based on compound-interest calculations is necessary if sound judgment is to prevail. Comparisons are best made on the basis of annual service charges, which are determined by the sinking-fund method. These annual service charges represent the equal annual payments which at annual compound interest will provide for renewal at the end of the life of the post without any scrap value for the post. They are determined by the formula:—

$$\frac{CR\ (1 + R)^n}{(1 + R)^n - 1}$$

where C = final cost of post in place, R = rate of interest (5 per cent. = 0·05), n = life of post in years.

Table 4 has been compiled from this formula to show the annual service charges on a post costing 1s. set in place, with interest at 5 per cent. The table may be applied to give annual service charges on posts of other values by simple multiplication.

Example 2: What is the annual service charge for a post costing 1s. 7d. treated, *plus* 1s. to set (see previous example), and having an estimated life of fifteen years? Table 4 shows that the annual service charge for a post with a life of fifteen years and costing 1s. set in place is 0·097s.