

and if the trees are being grown for saw logs or other high grade material it is very necessary that the trees should lose their lower limbs rapidly ~~as possible~~, in order that the layer of wood which is laid on by growth over the knots will be as thick as possible. 1/8 in (?)

The Holly plots were two quarter-acre ~~areas~~ in a dense eleven-year-old stand of shortleaf pine. The ground had once been cultivated. One of the quarter-acres was left untouched, and permitted to grow without any human interference. From the other quarter-acre four-fifths of the standing trees were cut ^{out} as a thinning. That the trees which were taken out were the smaller individuals, without the vigor of their neighbors, is well shown by the fact that although their numbers ~~was~~ four-fifths of the total number on the quarter-acre, their cubic volume was only 54 percent of the total volume. The trees which remained were those whose crowns had not only plenty of overhead light (which is another way of saying that they were the tallest trees), but also a fair amount of side light. Other things being equal, the rate of growth of a tree, at least in diameter, is in proportion to the size of its crown. The leafy branches which form the crown are the laboratories in which the tree, with the aid of sunlight, compounds its food from the mineral-bearing moisture of the soil, and the oxygen ~~of~~ the air. The more leaves which are at work making food, the more