

ment of the tree. Whence, and from actual observation, it has been confidently asserted, that the best season to cut timber, as well as to prune fruit trees, to prevent the dry rot in the timber, or in that part of the living tree from which the amputated limb has been taken, is during the summer when the trees are in full foliage, and their sap is in pure and active circulation. (*i*)

But all trees, although standing within the general range of their appropriate climate, are very materially affected by the peculiar soil and situation in which they may happen to be rooted. (*j*) Even the great white pine, (*pinus strobus*), the lofty chief of our forests, which in some instances elevates its top to the height of a hundred and eighty feet from the ground; (*k*) and the beautiful flowering poplar, (*liriodendron tulipefera*), which may be ranked next to it in stature, and only after the oak in utility, exhibit, in the texture of their wood as well as in their size, the most unequivocal evidence of the generosity or unfriendliness of the soil in which they stand. (*l*) But such is the peculiar constitution of the white oak, (*quercus alba*), which for general use is considered as the most valuable of all the timber trees of our Union, that it attains its largest size and greatest perfection in the cold and comparatively barren soil of those swampy plains, many of which extend in considerable tracts along the borders of the Chesapeake, and on the right and left shores of the lower Potomac; while on the otherwise fertile soils, west of the mountains, it is by no means so remarkable for its size. Whence it may be strongly inferred, that a tree, the texture and density of the wood of all the species being known to be alike, may in one situation attain a much larger size, and in a transverse section of its trunk exhibit a greater number of concentric circles than another of the same age the growth of a different situation.

If it be true that trees are enlarged chiefly or only by the formation of successive concentric layers, then it necessarily follows, that those layers, as the tree enlarges, must become wider as well as longer each year, so as to embrace the whole of its increased dimensions; and consequently the quantity of wood formed each year, supposing the several concentric layers to be of the same

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(*i*) Essay on Vegetable Physiology, by Armstrong, Prof. &c. Washington College, Virg. chap. 7 and 19; The Farmers' Register, by Ruffin, 7 vol. No. 4 and 8.—(*j*) 2 Mich. Am. Sylva, 130, 226.—(*k*) 2 Mich. Am. Sylva, 293.—(*l*) 1 Mich. Am. Sylva, 302; 2 Mich. Am. Sylva, 295.