



Figure 7. Plots of ring distance from pith for three trees against ring number at (a) breast height (BH), (b) one-quarter (1Q) height, (c) midheight (MID), and (d) three-quarter (3Q) height in mature longleaf pine. Trees 1, 3, and 7 represent fast, intermediate, and slow (suppressed) growth rates, respectively.

for DBH (36.8 vs 49.8 cm), the radial dimensions of the juvenile wood zones would appear to be similar at BH. The smaller radial distance at BH for the smallest tree (same cambial age) is to be expected; however, this illustrates how assigning the juvenile wood zone on the basis of cambial age can give different radial distances for trees of the same age. Further complicating this observation is that the plots for the intermediate and smaller trees show greater similarity at the higher relative heights (Fig 7). Altogether, this illustrates that for trees of the same age but different growth, the zone of wood that may be assigned as juvenile on the basis of cambial age can vary both in absolute radial distance and height.

CONCLUSIONS

Similar to other maps of the southern pines, either based on single trees, averaged tree data, or models representative of even larger groups of

trees, the ring SG map shows a central core of low-density wood running the length of the tree bole. Vertical and radial variations in ring SG showed apparent differences between the northern and southern cardinal directions. Dissimilar to most illustrations/maps of juvenile wood (core-wood), the zone of low ring SG wood in the center of the tree is wider at MID than at the lower and higher relative heights; also, ring SG increases from the center (pith) but did not extend all the way to the wood closest to the bark, showing that wood radial variability of young trees does not apply directly to mature trees. Seemingly contradictory to what is known about southern pine wood quality, the wood above the 3Q height had narrow rings and higher ring SG, being wood features normally associated with higher wood quality. Altogether, the wood property maps can be interpreted as supportive of an alternative juvenile wood illustration in which the wood near the base of the tree, the so-called

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