

Hierarchy / level	Why should an earlier (and perhaps longer) growing season length lead to greater tree growth / productivity?	Why might an earlier (and perhaps longer) growing season length NOT (visibly) lead to greater tree growth / productivity?
Individual tree	<ul style="list-style-type: none"> Assuming earlier leads to longer growing seasons (i.e. more growing degree days), this means more growing degree days, which means more photosynthesis. This could occur because temperatures are on average warmer or because temperatures are above an important threshold for longer. 	<ul style="list-style-type: none"> If earlier / longer growing seasons cause trees to indeed grow more, but to allocated growth to something that we don't typically measure (e.g. carbon storage, belowground growth), there may be no effect on common metrics of annual tree productivity (ring width, dbh). Earlier growing seasons from a temperature point of view may not necessarily mean a longer growing season from the trees point of view, if this is paired with increased frost damage early in the growing season or drought stress late in the growing season. Individual trees may be preprogrammed (developmentally) to only allocate so much to growth, so that an earlier / longer growing season may not necessarily lead to more growth (this argument may be similar to the first). This argument I think presupposes that there is some phenotypic / evolutionary control over this, so that for wide ranging species, this developmental control varies across elevation / latitude.
Forest community (ecosystem)	<ul style="list-style-type: none"> All individual trees grow more (see above) Trees of different species avoid some level of competition (suppression of growth) because their times of optimal growth are more spread out, thus, the forest as a whole is more productive (even if individual growing seasons are the same length). 	<ul style="list-style-type: none"> No individual tree grows more (see above).