

Appendix VI. MAI and Rotation Age

MAI Curves

Current annual increment (CAI) is the increase in volume over the current year. It is, however, difficult to measure growth for a single year so a 5-year period is substituted instead. The difference in volume at the start of the period, divided by the number of years within the period is the periodic annual increment. Dividing total volume at any age by the age derives the mean annual increment (MAI). Over time, current or periodic annual increment increased rapidly, peaks then drops rapidly, while mean annual increment increases slowly and drops off slowly after peaking. When both curves are plotted over age they generally intersect near the peak of MAI. This point of intersection denotes the point of most efficient volume production over time. Without regard to tree size, pathogens and form it is considered the ideal harvesting or rotation age.

In consideration of:

- softwood and hardwood peak MAI
- Pathological tendencies of species within the stratum
- Age/diameter relationships and minimum utilization standards
- Size, abundance and growth rate of understory species
- Likely age of breakup for strata

An optimum rotation age was established as well as a minimum harvest age and a preferred operability range for age.

Death age was established using TSP data age ranges or extent of age data as well as species silvicultural information.

The following graphs were prepared to assist in the determination of rotation age, minimum harvest age and death age.

















