Introduction

Thinning is the technique that more than any other distinguishes intensive silvicultural practice and is the primary means by which productivity of stands can be increased beyond what might be achieved under purely natural conditions. Thus, appreciation and understanding of thinning procedures requires knowledge of many fundamentals basic to silviculture.

Recognition of crown classes and evaluation of relative crown position is important to many silvicultural practices. The crown classes most commonly used are dominants, codominants, intermediates and overtopped. You should know the definitions and be able to interpret and distinguish crown classes from previous discussions.

Objective

The objective of this exercise is to compare thinning methods as to the material removed and effect on the residual stand.

Field Location

33-year eastern white pine plantation, Oak Ridge Forestry Experiment Station

Equipment

Field data forms, diameter tapes, flagging, reel tape, clinometer, prism

Field Procedures

1. Divide into field crews as designated by the instructor
2. Lay out a square one-fourth acre plot (104.3’ by 104.3’)
3. Designate a corner of your plot for re-identification, i.e., be able to find that corner when you return the next lab period
4. Determine plantation spacing.

5. Measurement of trees
   a. Make a preliminary determination of basal area using a prism
   b. Map the remaining trees on your plot with columnar paper
   c. Record diameter (nearest inch) and crown class (overstory or subordinate) for each tree
   d. Select a subsample of any 3 overstory trees (dominant/codominants) and measure: total height and height to base of live crown

   **Accurate and efficient collection of data this week will facilitate your work next week!** *We will only use the following crown classes ---- overstory and subordinate. WHY?*

6. Determine before 2\textsuperscript{nd} week
   a. Mortality per acre for the past 32 years based on the original planting
   b. Basal area per acre --- add BA for each tree measured in the plot, then put on a per acre basis. Compare to your prism measurement.
   c. Volume per acre (volume tables in handout)

7. Determine site index from table in handout