

IX. Timber Crop Tree Investment Analysis

Techniques for estimating individual tree volumes with a calculator are explained in Appendix E, *Timber Crop Tree Investment Analysis*. Using the formulas given, a calculator with business analyst features, and appropriate local stumpage values, individual tree rates of return and income may readily be calculated.

The **Timber Crop Tree Investment Analysis Sheet** (sample included in Appendix E) is a useful tool for helping you evaluate the financial potential of an individual tree.

(Note: A reproducible version of the sheet can be found in the backpocket of this publication.)

X. Crop Tree Management versus Area-Wide Thinning

What makes Crop Tree Management so different from an area-wide thinning? Crop Tree Management requires you to focus attention on retaining those trees with the greatest potential to produce specific benefits consistent with the landowner's property goals. You are forced to single out and release those "best" trees, which often means removing some trees that might ordinarily be retained when doing an area-wide thinning.



Many area-wide thinnings simply take out the poor trees and retain the good ones. Frequently, marking rules for these treatments call for removing all high-risk and

poor-quality timber trees as a first priority. No attention is given to the release of crowns. On the surface, these stands usually look very good to foresters, but can they produce optimum benefits consistent with landowner objectives?

Many area-wide thinnings simply take out the poor trees and retain the good ones.

Crop Tree Management requires you to retain trees with the greatest potential to fulfill the landowner's goals. This often means removing competing trees that would be retained in area-wide thinnings.

With Crop Tree Management , the marking rules are changed. The distribution of the cut trees may be very different. The first priority trees for removal are those that are interfering with the development of selected crop trees (See fold-out on Page 56) .

Consequently, from a timber production perspective, you may be leaving some undesirable or high-risk trees in the stand and removing some fairly good trees because they inhibit the ability of crop trees to produce benefits.



Implementing a Crop Tree Management prescription generally means cutting the trees with crowns that are competing with those of the crop trees. If enough of the trees that need to be cut are commercially valuable, the treatment can produce income for the landowner.

Because this system is quite different from traditional practices, it is extremely important that the logger and/or tree feller be part of the Crop Tree Management team. A clear understanding between the landowner, forestland manager, and tree feller is essential for successful application of the practice. This is especially true if you are doing "leave tree" marking rather than "cut tree" marking because many tree fellers are not currently experienced with this approach.

Using leave tree marking, crop trees are identified with paint. Trees to be cut are not painted. The tree feller applies a crown-touching release to each crop tree, cutting only those trees with crowns that touch and compete with the crop tree. Not all unmarked trees in the stand will be cut, especially if relatively few crop trees are designated. Any release these remaining trees receive is incidental, because it occurs only as a result of trees being cut to release the crop trees.

A clear understanding between the landowner, forestland manager, and tree feller is essential for successful application of the Crop Tree Management System.
